STATE OF NEW YORK
DEPARTMENT OF CONSERVATION
WATER POWER AND CONTROL COMMISSION

Chloride Concentration and Temperature of Water from Wells in Suffolk County, Long Island, New York, 1928-53

By
J. F. HOFFMAN and S. J. SPIEGEL
Engineer and Geologist, U. S. Geological Survey

Prepared by the
U. S. GEOLOGICAL SURVEY
In cooperation with the
NEW YORK STATE WATER POWER AND CONTROL COMMISSION
SUFFOLK COUNTY BOARD OF SUPERVISORS
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Chloride Concentration and Temperature of Water from Wells in Suffolk County, Long Island, N. Y., 1928-53

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ABSTRACT

Sea-water contamination of Suffolk County's ground-water reservoir is an ever present possibility because of the proximity of sea water and increasing ground-water withdrawals. In order to detect any sea-water encroachment, more than 1,000 determinations of chloride in water sampled from 425 wells have been assembled by the U. S. Geological Survey. The significance of these chloride data is appraised in this report. At many of the wells sampled, ground-water temperatures were measured concurrently. Evaluation of these temperatures also is included.

Suffolk County, 920 square miles in area, occupies the eastern two-thirds of Long Island, N. Y. On the north, east, and south it is bounded by sea water. Geographically, Suffolk County is divided into 3 areas — the main body, and two peninsulas termed North Fork and South Fork. Agriculture is the major source of income in eastern Suffolk County; however, in western Suffolk County it is fast being displaced by industry.

Three water-bearing formations are recognized in Suffolk County, the Lloyd sand member of the Raritan formation, the Magothy(?) formation, and the upper Pleistocene deposits. The major ground-water withdrawals are made from the upper Pleistocene deposits, the shallowest source. In 1955, ground-water pumpage in Suffolk County amounted to more than 24,000 million gallons.

Contamination of a well-water sample was established by comparison of its chloride concentration with that normally expected in the area. Where contamination was ascertained, possible sources of chloride contamination were sought. The data suggest that, besides sea water, fertilizer and sewage are sources of contamination that contribute sizable amounts of chloride to the ground water. Other possible sources of chloride contamination are industrial wastes and salts used in highway maintenance. The study shows that a careful review of each instance of contamination is necessary, in order that sea-water contamination of a ground-water supply will not suspected where it does not actually exist.

Normal chloride concentrations in the ground water of Suffolk County range from 5 parts per million (ppm) in western inland Suffolk County to 25 ppm at the eastern tips of the two peninsulas. Contamination of the ground water by fertilizer occurs principally in the Riverhead and North Fork areas. In the Riverhead area the affected ground water had chloride concentrations as high as 112 ppm. Sea-water contamination of the ground water of Suffolk County has occurred only in isolated wells or ponds. This contamination has been restricted largely to the North Folk area, although a few cases of sea-water contamination have been recognized in nearshore areas of the South Fork and of the main part of Suffolk County. Contamination by sewage has raised the chloride concentration of surrounding ground water, in some places, to as much as 50 ppm. Owing to the paucity of data, as well as the masking effects of other sources of chloride contamination, the extent of contamination by sewage in Suffolk County is unknown. Some ground-water contamination by waste chlorides of in-

dustrial processes is suspected; however, no clear-cut instances are known. Similarly, the sizable quantities of calcium chloride and sodium chloride used in highway maintenance make it likely that these salts may contaminate ground water locally. Here again, no clear-cut instances are known.

Conclusions based on the study of the chloride data are as follows:

1. In a chloride-detection program, chemical analysis of some of the sampled well waters for constituents in addition to chloride is necessary to enable better evaluation of the significant factors.
2. An intensive investigation of the occurrence of salt water underground should be made in the North Fork — especially in the Greenport and Orient areas.
3. Information on ground-water quality in the South Fork and at depth beneath Fire Island and the rest of the barrier beach of which Fire Island is a part is deficient or lacking entirely.

Ground-water temperatures measured at most Suffolk County wells less than 300 feet deep ranged from 50° to 55°F. In deeper wells, the temperatures ranged from 50.4° to 64°F.

Seasonal temperature changes in the water pumped from wells by the Riverhead Water District make it seem probable that water from the Peconic River recharges the aquifer tapped by the wells. More than 200 million gallons of water is pumped annually from wells less than 600 feet from the river.

Relatively few data on ground-water temperature exist for Suffolk County. In anticipation of future industrial development in the area, it is suggested that additional temperature measurements be made at selected wells. Periodic temperature measurements at some of these wells to establish any temperature changes resulting from the artificial recharge of ground water would improve the usefulness of the ground-water information.

INTRODUCTION

Purpose and Scope of Report

In 1955, according to figures compiled by the New York State Water Power and Control Commission, more than 270,000 million gallons of fresh water was used on Long Island, N. Y. Surface water delivered to Kings and Queens Counties in western Long Island from upstate sources amounted to 168,000 million gallons, or 62 percent of the total. Ground water pumped from sand and gravel underlying Long Island constituted the remaining 102,000 million gallons, or 38 percent. Of the total ground water pumped on Long Island in 1955, about 24,300 million gallons (24 percent) was pumped from Suffolk County.

Because the welfare of Long Island depends to a significant extent on an adequate ground-water supply, the U. S. Geological Survey has investigated ground-water conditions there since 1932. This islandwide program has been carried on in cooperation with the New York State Water Power and Control Commission, the Nassau County Department of Public Works, the Suffolk County Water Authority, and the Suffolk County Board of Supervisors.

One of the major concerns is the possibility of landward encroachment of the surrounding sea water into Long Island's ground-water supply, such as occurred in western Long Island in the 1930's. In order to detect any such sea-water encroachment, part of the investigative program has involved collecting samples of water for determination of chloride content and to assemble available records of chloride analyses. In Suffolk County alone, about

1,000 chloride determinations have been made of water samples drawn from approximately 425 wells. At many of these wells, ground-water temperatures also have been measured to provide background data for uses of water involving cooling and for evaluating the effects of artificial recharge of ground water in the future.

The purpose of this report is to present all available chloride and temperature data on samples of ground water collected in Suffolk County, N. Y., between 1928 and 1953, and to offer explanations based on these data for the presence of chloride concentrations that appear to be higher than normal. The chloride data, presented in tables 2 and 3, pertain to and will be used as part of interpretive studies of the chemical quality of ground water and the possibility of contamination by encroaching sea water in shoreline areas. Included with the report is a map showing locations of all the wells sampled (pl. 1), and a summary table (table 1) including well data and maximum and minimum chloride concentrations for the period of record. Chloride concentrations and temperatures determined prior to compilation of the present report were released to the open file of the U. S. Geological Survey and to cooperating agencies in tabulations dated June 1939, August 1940, November 1947, February 1949, and July 1951.

The analyses shown in the tables were made at laboratories of the New York City Department of Water Supply, Gas and Electricity; the New York State Department of Health; the Suffolk County Department of Health; the Brookhaven National Laboratory; and the U. S. Geological Survey.

Geographic features of Suffolk County

Suffolk County, 920 square miles in extent, occupies the eastern two-thirds of Long Island (fig. 1). Nassau County is on the west, and sea water bounds the other three sides. Long Island Sound is on the north, and the Atlantic Ocean on the east and south. A series of barrier beaches along the south shore is partially separated from the main part of the County by Great South Bay and other bays. (See pl. 1.) Suffolk County is divided geographically into three areas — the main body, and two peninsulas termed the North Fork and the South Fork. These forks originate at Riverhead and extend eastward for about 27 and 40 miles, respectively.

Suffolk County has a mild climate, and a growing season averaging about 196 days. According to reports of the U. S. Weather Bureau and data collected by the Geological Survey, the average annual air temperature ranges from 50.2°F at Bridgehampton on the South Fork to 52.4°F north of Riverhead. The annual precipitation, averaging more than 43 inches, is uniformly distributed throughout the year.

Because of these climatic factors, the gentle slopes of much of the land surface, and a fertile soil, much of the land of Suffolk County is suitable for agriculture and is so used at present. Excellent subsoil drainage through the underlying sand and gravel makes it possible to fertilize and irrigate crops intensively. Such procedures result in optimum crop yields. Because of the long growing season, two crops of potatoes, the principal vegetable grown, are harvested annually. Considerable acreage is used also for the cultivation of other vegetables such as cauliflower and snap beans.

Occurrence of ground water

Ground water occurs in the unconsolidated clay, sand, and gravel that underlie Suffolk County. Three water-bearing formations (aquifers) have been recognized, in ascending order the Lloyd sand member of the Raritan formation, which rests directly on the Precambrian bed-

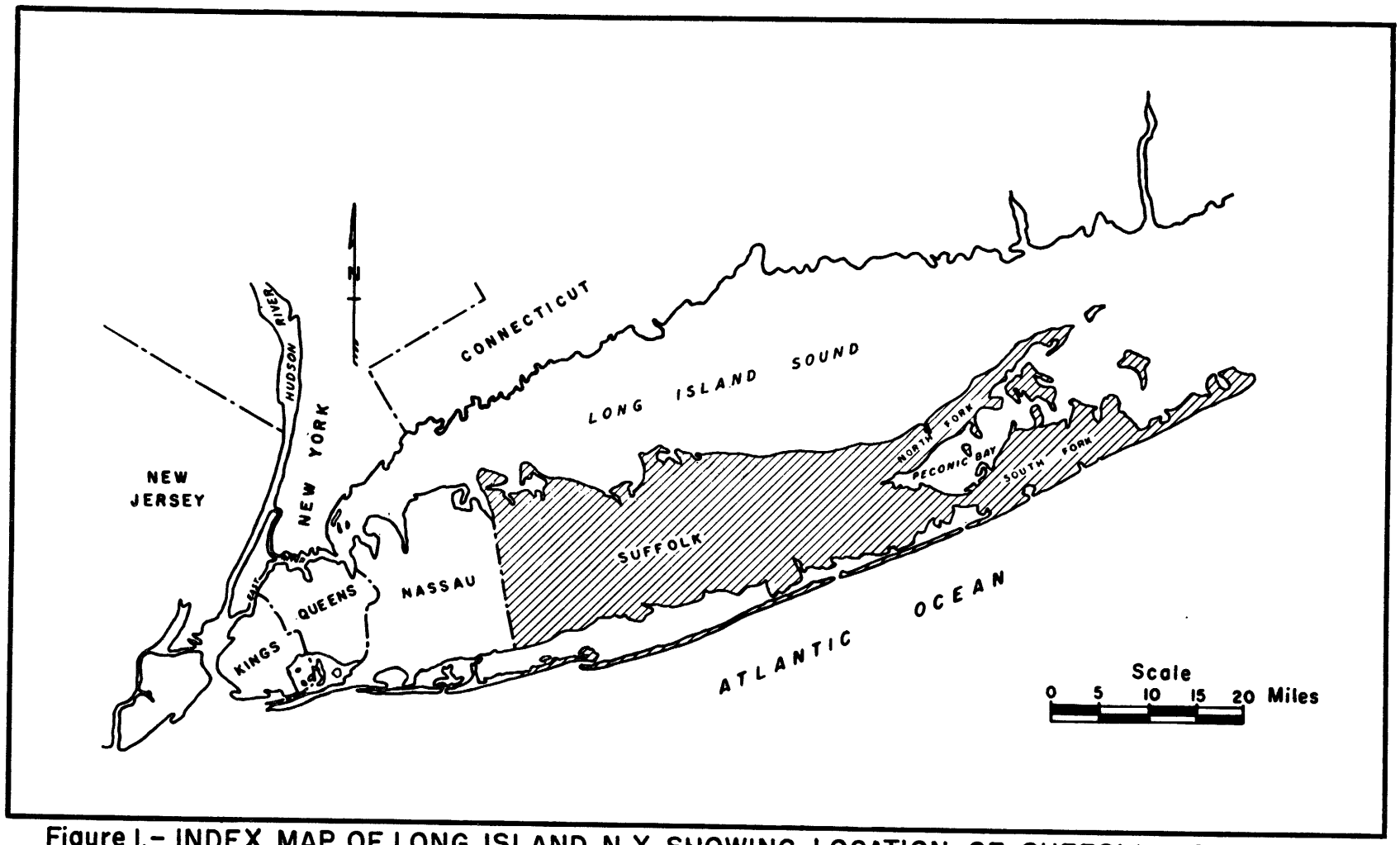

Figure 1.- INDEX MAP OF LONG ISLAND, N.Y. SHOWING LOCATION OF SUFFOLK COUNTY.

rock, and the Magothy(?) formation, both of Cretaceous age, and the upper Pleistocene deposits. The average thickness of these units, as estimated from available data, is about 250 feet, 700 feet, and 150 feet, respectively. The Jameco gravel, which yields sizable quantities of ground water in western Long Island, has not been identified in Suffolk County. Information on these formations is summarized in a report by deLaguna and Perlmutter (1949).

Practically all the ground-water withdrawals made in Suffolk County are from the upper Pleistocene deposits, leaving the large volume of water in storage in the deeper Magothy(?) formation and the Lloyd sand member of the Raritan formation relatively undeveloped. The ground water in the Lloyd sand member and in the Magothy(?) formation is confined under artesian pressure by layers and lenses of material of low permeability which overlie the Lloyd sand member and which are distributed throughout the Magothy(?). Wells near the shoreline that tap these older water-bearing formations ordinarily flow. The water in the upper Pleistocene deposits of Suffolk County, for the most part, is unconfined. Its surface, which is the upper limit of the zone saturated with water under hydrostatic pressure, is known as the water table. The total amount of water stored in the deposits at any one time depends chiefly on the volume of saturated material and the porosity of the material. It amounts to many billions of gallons.

In 1955, about 24,300 million gallons of ground water was pumped for use in Suffolk County. Of this total, about 9,900 million gallons (41 percent) was pumped for public supply, 8,000 million gallons (33 percent) for industrial use, and 6,400 million gallons (26 percent) for agricultural use. Increased use of ground water during recent years is particularly evident in both the eastern and western part of Suffolk County, and it foreshadows future ground-water problems. Of special concern is the potential sea-water contamination of the ground water in shoreline areas, particularly on the North Fork.

The usability of the ground water of Suffolk County depends in large part on its chemical quality. Actual or potential salt-water contamination of ground water in nearshore areas of Suffolk County is of paramount importance, and chloride concentration is an excellent index of the extent and degree of contamination.

CHLORIDE CONCENTRATIONS

Tables 1-3 give the results of about 1,000 determinations of chloride concentrations in samples from 425 wells and 10 irrigation ponds in Suffolk County, made between 1928 and 1953. For some wells only single determinations were made; for others, samples were taken and analyzed periodically. A single check sample ordinarily is sufficient to establish whether the chloride concentration of a well water falls within the range normally expected. Where contamination is suspected, additional analyses are necessary to ascertain the magnitude of changes in chloride concentration.

Chloride concentrations in waters from the upper Pleistocene deposits, listed in table 2, range from 2 to 5,810 ppm; the extremes for water from the Magothy(?) formation and the Lloyd sand member of the Raritan formation are 3.4 to 65 ppm and 3.6 to 7,600 ppm, respectively. However, most of the chloride concentrations in waters sampled from all formations are grouped in a much narrower range. These ranges are from 10 to 30 ppm for waters sampled from the upper Pleistocene deposits, 5 to 15 ppm for waters sampled from the Magothy(?), and 5 to 7 ppm for waters sampled from the Lloyd sand member.

Well water having a chloride concentration in excess of 500 ppm does not constitute a very satisfactory supply for most uses. Although water having a chloride concentration as high as 500 ppm is not harmful to the human body, chloride concentrations in excess of about 250 ppm impart a salty taste to the water. Listed below are the maximum chloride concentrations desirable for various uses.

Use	Maximum desirable chloride concentration (ppm)	Source
Public supply	250	U. S. Public Health Service
Irrigation	100 to 1260*	California State Water Pollution Control Board Publication No. 3 "Water Quality Criteria"
Carbonated beverages	250**	do.
Food-equipment washing	250**	do.
Sugar making	20**	do.
Textile processes	100**	do.
Paper making:		
Groundwood pulp	75**	do.
Soda pulp	75**	do.
Kraft pulp	200**	do.

* Varies with type of crop.

** Recommended threshold or limiting concentration.

The deposits that underlie Suffolk County were laid down mostly by fresh-water streams and hence in their original state contained little or no salty water. Subsequent to their deposition, any residual salt that may have been present, or that may have entered the beds at times of high sea levels, was leached away by percolating fresh water. Furthermore, the minerals constituting the deposits would probably yield relatively little soluble chloride. For these reasons, the bulk of the chloride that occurs naturally in the ground water of Long Island is considered to be derived from wind-borne sea spray (Jackson, 1905) perhaps in part brought in by occasional hurricanes or other severe storms.

A sample of rain water collected on the barrier beach of Fire Island (lat. 40°42′50″, long. 72°55′45″) and analyzed in the field by the U. S. Geological Survey had a chloride concentration of 12 ppm. Additional rain-water samples, collected during 1956 at the Village of Greenport and analyzed by the Village Superintendent of Public Works, had chloride concentrations ranging from 2 to 8 ppm (Harry Monsell, personal communication). Concentrations from this source vary from place to place, depending upon the distance from the seacoast, the amount of precipitation, the rate of evaporation, the degree of protection from ocean winds, and the direction of the prevailing winds (Jackson, 1905).

During the early 1900's Jackson (1905) and Veatch (1906) collected information on, or had determinations made of, the chloride concentrations in well waters of Long Island. In early years such data were used in estimating the degree of pollution of ground water by sewage, but this method has largely been superseded by use of the coliform index. Although some of these early samples may have been contaminated slightly, they probably represent approximately the chloride concentrations in ground water under natural conditions. For purposes of comparison with current (1953) conditions, these concentrations are here considered "normal". Thus, on the basis of these early determinations, it appears that the maximum normal chloride concentrations for the ground water in the upper Pleistocene deposits underlying the inland portions of western Suffolk County is about 5 ppm. For inland portions of

eastern Suffolk County, normal concentrations may be as high as 10 ppm. Along the coasts normal chloride concentrations are higher. In coastal areas of western Suffolk County these may be as high as 10 ppm, and in eastern Suffolk a maximum of 15 ppm may be expected. At the eastern ends of the two Forks, the greater exposure to oceanic influences may cause the normal chloride concentration of the ground water to be as high as 25 ppm. This estimate is based on the chloride concentration in the ground water of Plum Island, which is about 1½ miles east of Orient Point. The chloride in the ground water of Plum Island is derived from natural sources.

Much of the ground water in Suffolk County, although apparently more or less "normal," actually may have been contaminated slightly. For example, the six determinations for chloride concentration (see tables 1 and 2) made for well S1892 (pl. 1, rectangle F-17)[a] range from 24 to 28 ppm and may be normal" for the area in recent years, but in comparison with Jackson's data (1905) they are high enough to suggest some contamination. Similarly, the concentrations at other wells such as S1818 (pl. 1, G-19), between 24 and 42 ppm, or S4153 (pl. 1, H-21), between 24 and 36 ppm, probably represent some contamination. An example of completely uncontaminated water might be that from well S3197 (pl. 1, E-15), for which 3 samples showed a range of from 4 to 7 ppm of chloride.

In contrast, the possible seasonal and annual range in normal chloride concentration at any one place is not accurately known. Therefore, the chloride concentration of a well-water sample may be less than the maximum normal concentration indicated, yet the water still may be slightly contaminated.

Causes or sources of contamination include fertilizer, sea water, sewage, industrial wastes, and salts applied to highways. These are discussed, together with examples of contamination resulting from some of them, in the following paragraphs.

Contamination by Fertilizer

Relatively high chloride concentrations in the ground water in the upper Pleistocene deposits underlying intensively farmed areas near Riverhead, the North Fork, the South Fork, and the main part of Suffolk County appear to be the result of leaching of chloride salts contained in fertilizers. In these areas fertilizers containing 73 to 254 pounds of potassium chloride per ton are used extensively. The population is small, and houses and cesspools are widely scattered. Most of the wells showing high chloride are relatively remote from the shore, and there is no industrial development. Thus fertilizer must be the principal source of contamination. However, it is possible that in some shoreline areas sea water drawn toward pumped wells may contribute to the high chloride concentrations determined.

The "Riverhead area" as used in this report includes about 60 square miles in the northeastern corner of the main part of Suffolk County, extending into the North Fork as far as Laurel. The hamlets of Aquebogue and Jamesport on the North Fork also are included. The maximum chloride concentrations in well water sampled in this area range from 8 ppm in well S3418 (pl. 1, E-18) to 112 ppm in S3627 (pl. 1, F-18); most of the samples had chloride concentrations noticeably above the normal maxima of 10 to 15 ppm expected in that area. For example, water from well S1892 (pl. 1, F-17) in Calverton had a concentration of 28 ppm. These concentrations are distinctly higher than those in the ground water underlying the adjacent, uncultivated Government-owned lands in Brookhaven Township where maximum chloride concentrations determined range from about 4 ppm (S6471) (pl. 1, E-15) to 10 ppm (S6405). These concentrations are probably "normal" and indicate essentially no

[a] See well-numbering system at end of report.

contamination. Chloride concentrations in the water sampled from domestic well S5341 (pl. 1, F-17) in Riverhead ranged from 19 to 24 ppm and strongly suggest contamination by fertilizer (Wallace deLaguna, U. S. Geol. Survey, personal communication). The magnitude of the chloride concentration, the associated nitrate concentrations, which ranged from 38 ppm to 47 ppm, and the fact that fertilizers are used to a considerable extent in the vicinity support this inference. However, it is possible that contamination from a cesspool may be at least partially responsible for the chloride and nitrate, as this well is near a dwelling. Also, inasmuch as this well is nea ra main road, it is not unreasonable to suppose that salt used for de-icing roads in the winter also might contribute some chloride to the ground water. Near the shoreline of the Riverhead area water from wells generally does not have a higher chloride concentration than water from wells farther inland, thereby indicating that contamination from sea water is minor, if present at all. Furthermore, the fresh-water levels are several feet above sea level, and any sea water or comparably salty water in the aquifers is probably a few hundred feet below sea level.

The "North Fork area" of this report covers about 70 square miles and extends from Laurel eastward to Orient Point. Here also, some well waters contain chloride that may have been derived principally from leaching of fertilizers. Omitting certain wells in which the chloride concentration is thought to be due predominantly to contamination by sea water, chloride concentrations in water from wells in this area range from 12 ppm (S7173, pl. 1, H-22) to 78 ppm (S7170, pl. 1, H-22). Both these wells are at Orient. The lower concentration of 12 ppm is about what would be expected in the area, and the water probably is not contaminated. The water from well S7905 (pl. 1, G-20) in Southold, having a chloride concentration of 35 ppm, is probably representative of water that has been contaminated slightly by leaching of fertilizer. Other wells in which fertilizer contamination is suggested are S9138 (pl. 1, G-20); (35 feet deep) in Southold and S9139 (pl. 1, H-21; 25 feet deep) in Greenport (Wallace deLaguna, U. S. Geol. Survey, personal communication), both in heavily farmed areas. Chloride concentrations in the water from these wells were 42 and 18 ppm, respectively, and the nitrate concentrations were 115 and 50 ppm. Like those mentioned in the Riverhead area, these are domestic wells, and at least part of the chloride and nitrate may originate by contamination from cesspools. The fresh-water body in the North Fork area is thin, and salty water derived from sea water is known to occur at relatively shallow depths. Thus, some of the higher chloride concentrations in well waters may be due in part to contamination from the salty water as well as from fertilizer.

The South Fork comprises the entire area from the vicinity of Riverhead to Montauk Point. A few scattered areas are farmed, but nothing so extensive as on the North Fork. Sampled wells are much fewer. The maximum chloride concentrations in the ground water underlying the farmed areas of the South Fork range from 9 ppm in Easthampton at well S7570 (pl. 1, F-23) to 30 ppm in Easthampton and Amagansett at wells S9140 (pl. 1, F-23) and S721 (pl. 1, F-24), respectively. Water from irrigation wells S5615 (pl. 1, F-22) and S7499 (pl. 1, F-21) in Bridgehampton and well S7117 in Southampton had chloride concentrations of 27, 26, and 22 ppm, respectively. The concentration of 9 ppm in well S7570 (pl. 1, F-23) is probably about normal for the ground water of the area. This well is 163 feet deep and is more than a mile from the nearest sea water. The concentrations of 22 to 27 ppm in wells S5615, S7499, and S7117 are probably derived from fertilizer. The deepest of these wells is 165 feet deep, and all are several miles inland from the shore. In this area, high-chloride fertilizers are used, there is practically no industry, and the population is widely scattered. Little is known concerning the depth to which fresh water extends in the South Fork area. However, fresh-water levels are relatively high, so that if water as salty as sea water is present at all it must be at relatively great depth, making contamination by upward movement highly unlikely under present conditions.

In the main part of Suffolk County, in scattered farmed areas remote from the sea, water from a few irrigation wells has chloride concentrations slightly higher than would normally be expected. For example, water from wells S4825 (Manorville; pl. 1, E-16) and S4195 (Yaphank; pl. 1, D-15) had chloride concentrations of 18 ppm and 12 ppm, respectively. On the other hand, the chloride concentrations in nearby wells away from cultivated fields were 10 ppm or less at about the same time. Inasmuch as there are no other local sources of contamination, even these small concentrations may reflect slight contamination from fertilizer.

In conclusion, the chloride concentration in ground water underlying areas where farms are closely spaced and intensively fertilized may be much higher than where a scattering of farms exist — provided, of course, that other sources of contamination have a minor influence. Assuming average conditions for precipitation and fertilizing procedure, chloride concentrations added to ground water from fertilizers alone may have been as much as 50 ppm. Such additions to the normal chloride concentration, especially in those areas where the chloride content is toward the upper limit of the "normal" range, would raise the chloride concentration of the ground water to as much as 75 ppm.

Contamination by Sea Water

Shallow ground water in the nearshore mainland areas of Suffolk County and on the peninsulas, barrier beaches, and small off-lying islands is, in general, underlain by salty water. Because of the density difference, the lighter fresh water floats on the salty water. The contact is not sharply defined, however, and a transitional zone, termed the "zone of diffusion," is thought to exist. As shown by work in other areas of Long Island (Perlmutter, and others, 1957) and elsewhere in coastal regions, the chloride content of the water in this zone varies, increasing in concentration toward the salty-water side.

If the contact between the fresh and salty water is considered to be sharply defined and a hydrostatic balance is considered to exist, the following formula can be written:

$$h = -\frac{d_f}{d_s - d_f} . h_f$$

where, h = the depth below sea level to a selected point on the fresh water-salty water surface,

h_f = the height above sea level of the water table directly above the selected point,

d_f = the density of the fresh water, and

d_s = the density of the salty water.

This relationship is sometimes referred to as the Ghyben-Herzberg formula. A reasonable density for Suffolk County's uncontaminated ground water is about 1.000 or slightly higher. The density of the bay and ocean water bounding Suffolk County differs from place to place, depending on the point of sampling. Where large volumes of streamflow discharge into a bay, the density of the bay water might be as low as 1.010. Where rapid ingress and egress of ocean water occur, the density might be as high as 1.025. If the salty water underlying the fresh water is considered to have as a maximum the density of 1.025 then theoretically, for every foot of fresh water above sea level, about 40 feet of fresh water exists in below-sea-level-storage. If the density of sea water is 1.010, the ratio becomes 1.100.

As ground water is in motion, Hubbert (1940, p. 924-26) suggests that the hydrostatic relationship, although originally determined empirically, gives approximately correct results but only at low hydraulic gradients. At higher gradients its use is incorrect. Specific data con-

cerning these conditions in Suffolk County are not in hand at the present. However, as any landward migration of the zone of diffusion vitally concerns the water supplies of nearshore communities, or even those located farther inland, part of the future ground-water investigative program will be to obtain more exact information concerning this problem.

Sea-water contamination of ground water, resulting in a higher than normal concentration of chloride, can take place by (1) landward migration of the zone of diffusion between fresh water and sea water occuring naturally in the formation, (2) sea-water inundation of low-lying shoreline areas as a result of high tides and storm winds, or of high winds alone, and (3) the pumping of a well situated close to a zone of diffusion at such a rate that salty water is drawn in. Contamination by sea water has caused some of the unusually high chloride concentrations at a number of individual Suffolk County wells and certain irrigation ponds on the North Fork at Orient, Greenport, Southold, Nassau Point, Peconic, and Aquebogue; on the South Fork at Montauk; and in the main part of Suffolk County at Hampton Bays and Eatons Neck. Chloride concentrations of the ground water at these points ranged from 240 ppm at well S1679 in Hampton Bays to 5,810 ppm at irrigation pond P-6 (see fig. 1) in Orient. The somewhat lower concentrations of chloride in the water from certain other wells also may be due to sea-water contamination, but sufficiently conclusive evidence is not at hand to support all cases of suspected sea-water contamination.

Orient area: Sea-water contamination of irrigation wells and irrigation ponds is in evidence in the vicinity of Orient, N. Y., an intensely farmed, heavily irrigated area of about 5 square miles at the eastern tip of the North Fork. (See table 2, pl. 1, and fig. 1.) This area is almost entirely surrounded by the sea, and salt marshes fringe the shoreline portions of some of the outlying farms. Occasionally, hurricanes or near-hurricane storms cause tidal waters to flood the low-lying lands. Because of this proximity to sea water, and of the fact that the fresh-water head is low, it is reasonable to assume that the fresh-water body is thin and that salty water occurs at a relatively shallow depth. Moreover, because of the absence of industrial plants in the area, the distance of the sampling points from the roadways, and the low population density, widespread above-normal chloride concentrations in the ground water cannot be attributed to industry, highway maintenance, or cesspools. Also, inasmuch as the use of fertilizer in other intensely farmed areas of Suffolk County has produced chloride concentrations of less than 75 ppm in the ground water, and presumably would produce a comparable effect in this area, concentrations above 75 ppm cannot readily be attributed to fertilizer. Sea-water contamination is the obvious remaining choice.

Some high chloride contents have been recorded from certain of the irrigation ponds in Orient. The highest recorded is 5,810 ppm from pond P-6 on September 30, 1948. Samples taken from this pond on later dates showed a fairly consistent decrease to 60 ppm on June 26, 1953. Heavy and continuous withdrawals during the summer of 1948 lowered the pond level and caused salty water to move into the pond either from the adjoining tidal inlet or from the ground beneath, or both. Draft from this pond ceased after 1948, and the water has gradually freshened. Most of the samples from the other ponds had chloride concentrations of less than about 75 ppm, but some had concentrations of 90 ppm or more — for example, P-4, 100 ppm on October 11, 1948; P-5, 124 ppm in August 1949; and P-9, 202 ppm on July 7, 1952. The water level in all these ponds is only 1 to 3 feet above sea level, and they are situated near salt marshes or tidal inlets. The high chlorides may be due in part to occasional sea-water inundation, or more likely perhaps to heavy withdrawals which lower the pond level and allow the adjacent salty surface water to move in, or underlying salty water to move upward.

Only three wells in Orient have shown high chloride — S189 (pl. 1, H-22), 7,600 ppm when drilled in 1935; S7176 (pl. 1, H-22), 1,000 ppm on September 30, 1948, but less on later dates; and S14597 (pl. 1, H-22), 835 ppm on September 20, 1949, and 296 ppm on July 6, 1950.

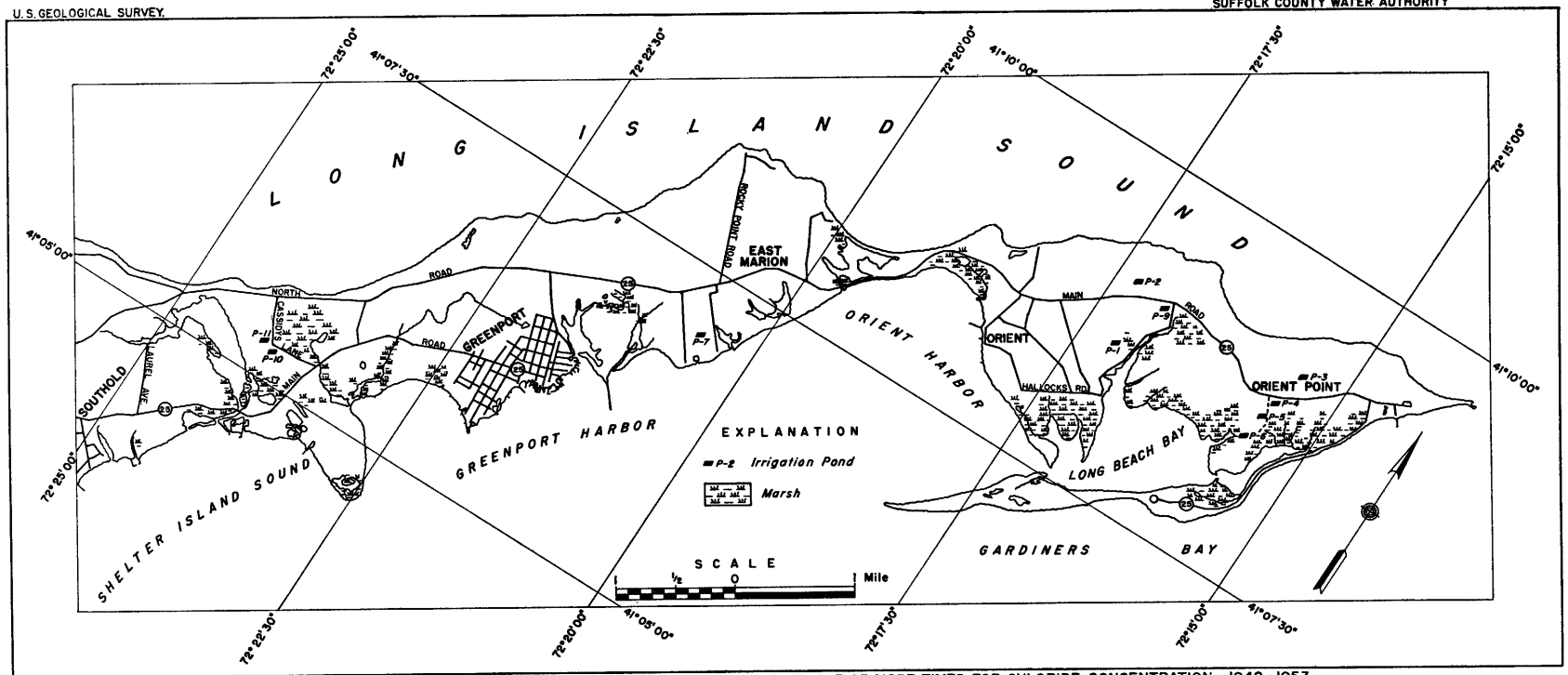

Figure 2.- IRRIGATION PONDS IN GREENPORT, EAST MARION AND ORIENT, N.Y., SAMPLED ONE OR MORE TIMES FOR CHLORIDE CONCENTRATION, 1948-1953.

Well S189 is 668 feet deep and reportedly yielded no fresh water when drilled. The well is on a low, narrow bar, which probably contains only a thin lens of fresh water floating on salt water derived from the surrounding sea. Water sampled from well S7176, a group of 6 well points driven to a depth of 11 feet, contained so much chloride that in the absence of any other source these concentrations are thought to represent admixture with sea water. At the time of sampling the elevation of the water table at this site was less than a foot above sea level. The shortest lateral distance to a tidal inlet is about 700 feet. Irrigation withdrawals during the summer of 1948 probably caused salt water to move in either laterally from the nearby tidal inlet or vertically from beneath, or both. This salty water, when mixed in the well with the fresh ground water, caused chloride concentrations of 1,000 ppm or possibly higher. Well S14597 is about 150 feet from the shore of Orient Harbor, in the town of Orient. Two samples of water taken from it had fairly high chloride concentrations (table 2). Prior to the summer of 1949, a satisfactory water supply was obtained from this well. However, in September, 1949. the chloride concentration of the water was 835 ppm, and in July 1950 a second sample contained 296 ppm. The depth of the well is not known, but it seems likely that the high chloride is due to admixture of salty water from the nearby bay or possibly the underlying salty water.

Greenport-East Marion area: At the Village of Greenport, about 4 miles west of Orient, some of the public-supply wells yield water having a detectable salty taste, probably due to the chloride content. Wells at four pumping stations supply a population of about 3,000 in the winter and possibly twice that number in the summer. Greenport is virtually surrounded by sea water. The highest place in the area is about 60 feet above sea level; however, most of the area is much less than 40 feet above sea level. The water table in unpumped localities has a maximum altitude of about 3 feet above sea level. A sewer system discharges domestic, commercial, and industrial wastes to Long Island Sound, so there is probably little groundwater contamination from these sources.

Station 3 of the Village of Greenport water system comprises 6 wells (S1673-78; pl. 1, H-21) about 55 feet in depth. These are pumped together, and the mingled water is pumped into the system. The chloride concentration of this water, which varies with the pumping rate and the duration of withdrawal, has ranged from 123 to 424 ppm, the higher concentration being in the summer (table 2). These concentrations are substantially higher than that determined in 1932 for the water pumped from well S178 (45 ppm) at the same site.

Station 1 has two wells about 35 feet deep that are pumped separately. Water from well S1668 (pl. 1, H-21) has had chloride concentrations ranging from 76 to 94 ppm; and well S1669 (pl. 1, H-21) showed concentrations of 135 and 153 ppm in the summers of 1949 and 1950, respectively (table 2). It is believed that these chloride concentrations indicate the admixture of salty and fresh water. Data obtained during the drilling of a test well S490 (V892),[a] drilled 690 feet to bedrock at Station 1 in 1903, indicated salty water at a depth of 225 feet (Veatch, 1906). These data are incomplete and it is not known how far above the 225-foot level the reported salty water extended nor what the actual chloride concentration was. During recent years, when the existing wells at Station 1 (S1668 and S1669) were pumped for brief periods at a rate of 600 gallons per minute (gpm), marked and rapid increases in the chloride concentration of the pumped water were observed (Harry Monsell, Village of Greenport Dept. Public Works, personal communication). As these wells are about half a mile from any tidal water, this contamination is probably the result of upward movement of underlying salty water. In 1953, pumping wells S1668 and S1669 at about 50 gpm produced water containing chloride in the concentrations listed in table 2.

The water from two wells in Station 4 (S3697-98; pl. 1, H-21) at East Marion as of 1953 showed no conclusive evidence of contamination. No chloride data are available for wells of

[a] See well-numbering system at end of report.

Station 2, which are used infrequently. The evidence discussed above strongly suggests that salty water underlies the fresh water-bearing beds beneath the entire Greenport-East Marion area.

Other North Fork areas: Other wells on the North Fork that are thought to have been contaminated by salty water in nearshore areas are S6059, Peconic (1,600 ppm); S4091, Southold (918 ppm); S5475-S5476, Nassau Point (103 ppm); S681, Aquebogue (65 ppm); and S716, Aquebogue (54 ppm).

Well S6059, (pl. 1, G-20), 78 feet deep, is approximately 500 feet from a tidal marsh. The log of the well shows 40 feet of fine sand and some clay overlying the 38 feet of sand and gravel in which the well is screened. As the elevation of the water table at this site is less than 1½ feet above sea level, this well is probably screened near the zone of diffusion separating the fresh water and the salt water below. Continued pumping of this well at 350 gpm gradually caused increases in the chloride concentration of the water to 1,600 ppm. As water having this concentration of chloride cannot be used for irrigation in this area, the well was ultimately abandoned.

Well S4091 (pl. 1, G-20) is about 500 feet from the head of Town Creek, a tidal inlet near the Town of Southold. This well, 45 feet deep, is screened in a bed of sand and gravel 60 feet thick, which is underlain by at least 80 feet of clay and sandy clay. According to the driller's report the water beneath the clay and sandy clay is salty. Pumping this well at a rate of about 225 gpm caused salty water to move either upward through the clay or laterally from the inlet. This water, mixing in the well with the fresh water, caused the chloride concentration of the well water pumped to increase steadily from 24 ppm on September 5, 1945, to 918 ppm on July 9, 1952. Owing to the high chloride concentration in the water, this well was abandoned and another well, S4091 R, was drilled about 500 feet to the west. The chloride concentration in the water from this well was 34 ppm in 1953.

Wells S5475-S5476 (pl. 1, F-20), drilled to a depth of 30 feet, are less than 500 feet from sea water in Nassau Point, an isolated colony of summer homes. The elevation of the water table in the vicinity is unknown but it probably is less than a foot above sea level, and the wells may be screened near the zone of diffusion. Although the draft from these wells is low, as they are used for domestic supply, the magnitude of the chloride (37 ppm, 1948; 103 ppm, 1950) is above the maximum normally expected (25 ppm) and suggests that pumping causes salty water to move into the pumped wells. As these wells are in the vicinity of houses, there is also the possibility that contamination from cesspools has contributed to the chloride concentration. No additional data are available, however, and further inferences are not possible at this time.

Well S681 (pl. 1, F-18), situated about 500 feet from the tidal estuary of Sawmill Creek in Aquebogue, is 255 feet deep and is screened in sand beneath 120 feet of clay. Because of the overlying clay, the water at the screen is probably confined. When the well was pumped at an unknown rate, the chloride concentration in the water increased from 11 ppm (1945) to 65 ppm (1947). For unknown reasons, use of the well was discontinued after 1947. Owing to the proximity of tidal marshes and other salt-water bodies and the subordinate influence of other chloride contaminants in the area, it seems likely that prolonged pumping induced salty water to move into the well either laterally through the water-bearing zone or from below, and caused the progressive increase in chloride concentration (table 2). Possibly sea water could move downward from the tidal marshes at places where the clay is absent, or alongside the well casing, but not enough information is available to support either possibility.

Well S716 (pl. 1, F-18), also located in Aquebogue, is about 0.8 mile west of well S681. The well is 223 feet deep and is screened in sand beneath 127 feet of clay which is inter-

calated with thin layers of sand. When it was first drilled the well flowed. Later, when the well was pumped at an unknown rate, the chloride concentration of the water increased progressively from 37 ppm (1945) to 54 ppm (1948). Between August 1948 and July 1949 a marked decrease in the chloride concentration took place (table 2), but sufficient data concerning the problem are not in hand to establish the cause. The closest salty surface water which might be a source of contamination is a small tidal streamlet leading to Terrys Creek, about 2,000 feet away from the well. Nothing is known concerning the position of the zone of diffusion between the fresh water and salt water in the area. It is possible that sea-water seepage from beds overlying the fresh-water-bearing zone has taken place, but it is more likely that salty water has been drawn into the fresh-water-bearing zone laterally or from below by pumping.

South Fork area: On the South Fork, the only well having a chloride concentration in the water considered to be due to sea-water contamination is well S1373 (pl. 1, G-26), in Montauk. A sample collected from this well on August 26, 1946, contained 880 ppm of chloride. Exact data concerning the altitude of the water level at this well are not available; however, it is probably less than 1 foot above sea level. This well, which is 50 feet deep and 1,500 feet from tidal water, is probably screened near the zone of diffusion. In view of the magnitude of the chloride concentration, the lack of other contaminants in the area, and the proximity of the ocean, it is probable that sea water is the contaminant. Pumping this well probably draws in a certain amount of salty water from the zone of diffusion, thereby contaminating the fresh ground water.

Main part of Suffolk County: At Hampton Bays, on the south shore of the main part of Suffolk County, the water from well S1679 (pl. 1, E-19), when 60 feet deep, had a chloride concentration of 240 ppm on September 22, 1941. This was the chloride concentration in the water after pumping at a rate of 350 gpm for more than 3 hours when the well was first drilled. Water having a chloride concentration of this magnitude was considered by the water company as undesirable for public consumption. For this reason, the screen was later pulled back to a depth of 31 feet and the pumping rate reduced to 180 gpm. At this depth and at this rate of pumping, water having a chloride concentration of 43 ppm (March 12, 1946) and 14 ppm (August 4, 1950) was obtained. Although no data concerning water levels at the site are available, the fresh-water head is estimated to be less than 1½ feet above sea level. As this well is about 1,400 feet from the shoreline, the chloride contamination at the 60-foot depth probably resulted from a small quantity of underlying salty water being drawn into the well. The water having a chloride concentration of 42 ppm obtained from fresh-water sands at a shallower depth was probably an admixture of salt water originally drawn in by the higher pumping rate with fresh water in storage. Gradual elimination of this contamination by pumping and lateral underflow is suggested by the chloride concentration of 14 ppm of the water sampled on August 4, 1950, which might be considered normal for the area.

On the north shore of western Suffolk County, at Eatons Neck, well S848 (pl. 1, F-9) is reported to yield water having a chloride concentration in excess of 430 ppm after long periods of pumping. At the same site, though farther from the shore, water sampled concurrently at wells S3554 (pl. 1, F-9) and S1039 (pl. 1, F-9), which tap the same water-bearing zone, had chloride concentrations of 35 ppm and 4.9 ppm, respectively. These data suggest that salt-water contamination of the water pumped from well S848 is taking place from the seaward side.

Summary: The relatively high chloride concentrations in the water from wells S1668, S1669, S1673-78 (Greenport), S1373 (Montauk), and S1679 (Hampton Bays) suggest that the ground water near the shoreline of the North Fork and the South Fork is underlain by salty water at a relatively shallow depth. This occurrence of salty water may be similar to that

recorded by the driller for well S153 (Westhampton Beach), drilled in May 1922 and screened at a depth of 268 feet. The driller's log for this well listed the following occurrences of salt and fresh water: salt water, 11 to 21 feet; fresh water, 32 to 40 feet; salt water, 45 to 75 feet; fresh water, 105 to 130 feet; and fresh water, 208 to 269 feet. The fresh-water-bearing zone, 208 to 269 feet, contained water under artesian pressure. Nothing is known concerning the conditions under which the water occurs in the other water-bearing zones.

Contamination by Sewage

Ground water in the vicinity of cesspools, septic tanks, or sewage-treatment plants may have sizable chloride concentrations. Because most towns in Suffolk County have no sewers, most homes discharge wastes to cesspools or septic tanks. Most of the chloride contribution made to these receptacles is in the form of urine, the per capita daily output of which contains 8 to 15 grams of sodium chloride (Fair, 1954). After temporary cesspool detention, the liquid waste seeps to the water table and moves slowly away with the ground water under the influence of the natural hydraulic gradient. The chloride concentrations in the ground water thus contaminated may range from very high values at points close to the source of contamination to normal concentrations at distant points where diffusion has reduced the contamination to a negligible amount.

The chloride concentration of the water sampled from well S742, 90 feet deep (pl. 1, F-16), in Wading River, was 22 ppm, about 17 ppm above that normally expected. This well is approximately 100 feet down the hydraulic gradient from the owner's cesspool. The distance from other sources of contamination, the proximity to the cesspool, and the nitrate concentration of 9.7 ppm in the well water suggests cesspool contamination as the source of this relatively high chloride. Similarly, water sampled from well S9144 (pl. 1, D-16), Center Moriches, had a chloride concentration of 50 ppm. This chloride concentration when considered with the associated nitrate concentration of 52 ppm is suggestive of contamination from either fertilizer or a cesspool. Investigation has indicated that there is little probability of contamination from any other source. As there are no farms within half a mile, and no fertilizer is used upgradient, the owner's cesspool is the most likely source of this chloride.

Chloride contamination from cesspools may exist at other wells listed in Table 2, such as S3720 (66 ppm), (pl. 1, F-17) Riverhead, and S2018 (49 ppm), (pl. 1, F-17) Reeves Park. However, the possibility of other sources of chloride in the area such as fertilizer, salts used for ice control (in the case of well S3720), fertilizer, or sea water (in the case of well S2018), makes the identification of sources inconclusive.

Identification of contamination by sewage is difficult at best. Some procedures useful in arriving at a conclusion, once it has been established that chloride contamination exists and that human wastes are discharged in the vicinity, are (1) elimination of other sources of chloride contamination; (2) determination of the presence in the water of nitrates and other nitrogenous compounds, formed during the decomposition of organic material; (3) bacteriological analysis of a water specimen for coliform organisms; and (4) detection of a tracer, such as fluorescein, introduced into the suspected cesspool. Each procedure has its limitations and therefore the results may not be conclusive. For example, it may not be possible to eliminate the possibility of chloride contamination from other sources; the source of the nitrogenous compounds dissolved in the ground water may be industrial wastes, fertilizers, or an organic source other than human excreta; the distribution of coliform organisms may be such that a bacterial count or identification may not be possible; and, in the case of tracers, the rate of ground-water movement may be so slow or the physical characteristics of the tracer may be such that it cannot be readily detected.

In densely populated communities, where cesspools are closely grouped, sizable contributions of chloride are made to the ground water over extensive areas. Although not particularly evident in Suffolk County at the present time, the chloride concentrations of the ground water in fast-growing unsewered communities can be expected to increase during future years.

Contamination by Industrial Wastes

A few instances of chloride contamination of ground water by industrial wastes are known on western Long Island, and probably some not yet identified are present in Suffolk County. Possible sources of chloride include brine from ice plants, some types of air-conditioning systems, or some meat-packing and food-processing operations; spent acids and salts from descaling and electroplating operations; spent water of sterilizing processes utilizing chlorine, such as sewage-treatment plants and swimming pools; and hydrated calcium chloride used for desiccation. Solutions containing chloride may reach the ground water either through spreading or percolation basins made for the purpose of disposing of the wastes, or through incidental leaching of stockpiled waste products.

Industrial plants in Suffolk County are widely scattered as yet, and there is no particular area in which industrial contaminants may be concentrated. A few of the higher chloride concentrations listed in table 2 may reflect industrial contamination, but no clear-cut instances are known.

Contamination Through Highway Maintenance

Substantial quantities of calcium and sodium chlorides are applied to Suffolk County highways for ice control in winter and for dust control in summer. For ice control alone, the Suffolk County Highway Department applied more than 810 tons of sodium chloride and 180 tons of calcium chloride to 428 miles of County and State Highways during the winter of 1955-56. This represents about 0.8 pound of the combined salts per linear foot of highway. Assuming an average precipitation rate of 43 inches per year and that 50 percent of this seeps to the water table, ground-water recharge in the immediate vicinity of treated highways would have an average chloride concentration of a hundred to several hundred parts per million, or even more. Movement of the contaminated water under a natural gradient away from the area of contamination and diffusion of the dissolved salts would distribute the chloride throughout a much greater volume of ground water. Thus at points some distance from the treated highways, chloride contamination of the ground water from this source would be negligible. The salts could also be blown from the highway in the form of dust and might contaminate the water some distance away, but not detectably.

Although Suffolk County has about 4,000 miles of highway, the salts are probably used only on the main ones. Thus it is possible that the ground water may be rather strongly contaminated from this source at places where drainage water from such highways is concentrated. However, no clearcut instances are known.

Summary and Conclusions

Chloride concentrations in the ground water underlying Suffolk County that are higher than would be expected naturally may be due to contamination from one or more of the following sources: fertilizer, sea water, sewage, industrial wastes, and salts used in highway maintenance. At several places chloride concentrations are high enough to indicate definitely some sort of contaminant. Clear-cut instances of contamination or suspected contamination

are widely distributed. At some places sea water is almost surely the contaminant; at others, fertilizer seems to be the source. Identification of the source is largely circumstantial and is based solely on unusual chloride concentration, and on the presence in the vicinity of one possible contaminant and the absence or probable minor influence of the others.

Nevertheless, the indications are fairly clear that in the areas of heavy cultivation, particularly the Riverhead and North Fork areas, the chloride concentrations of the ground water have been raised appreciably.

At a number of well installations in shoreline areas of Suffolk County, contamination has resulted from admixture of salty water. Such contamination has been noted in Orient, Greenport, and Southold and in a few other scattered localities. One well installation each at Orient, Southold, and Peconic has been abandoned owing to high chloride concentration. At Station 3 of its public-supply system, the village of Greenport has one group of wells that deliver high-chloride water to the public-supply system. By combination of this water with water of low chloride concentration from other wells, a potable water supply is delivered to the consumer.

Chloride contamination of Suffolk County's ground water, to date, by sewage, industrial wastes, and the salts used in highway maintenance is apparently minor and distinctly localized. However, current and future expansion of the population and industry of Suffolk County can be expected to cause additional chloride contamination of the ground water from these sources. In shoreline or even inland areas, such concentrations may give rise to the incorrect conclusion that contamination by sea water is taking place. On the other hand, contamination by sea water may go unrecognized where it is taking place because of the assumption that one of the other sources is responsible.

The first conclusion to be drawn from the study of these data is that an analysis for chloride only is inadequate to identify the source of contamination. In any program of chloride detection some comprehensive analyses should be made. These might be followed or supplemented by partial analyses including determination of iron, calcium, nitrate, bicarbonate, sulfate, pH, and specific conductance. The calculation of Langelier's saturation index (Langelier, 1936, p. 1500) through determination of pH and bicarbonate would provide useful background data for design of corrosion-resistant structures.

A second conclusion is that an intensive investigation of the occurrence of underground salty water would be warranted in the North Fork — particularly in the Greenport and Orient areas.

A third conclusion is that information on ground-water quality in the South Fork and at depth beneath Fire Island and the rest of the barrier beach is deficient or lacking entirely.

GROUND-WATER TEMPERATURE

The increasing use of ground water on Long Island for air conditioning and other cooling makes a knowledge of ground-water temperatures of Suffolk County desirable for design of such installations. In addition, as most of the spent cooling water is recharged to the sand and gravel from which it was withdrawn, a knowledge of the effect of this recharge on the temperature of the ground-water reservoir will help to avoid costly operational problems.

The maximum ground-water temperature desirable for systems utilizing well water to cool and dehumidify air passing in direct contact with cooling coils is about 57°F. Systems that use well water for other cooling purposes usually require a ground-water supply having a temperature below 70°F. A lower ground-water temperature permits more efficient and economical design, of course.

The temperature of the ground water between the water table and a depth of about 200 feet is generally about 3 to 6 degrees Fahrenheit above the average annual air temperature (Collins, 1925). Normally the rate of increase in temperature is about 1°F for each 60- to 100-foot increment of depth. In Suffolk County, N. Y., precise measurements of ground-water temperature were made at well S6409 (pl. 1, E-15). Readings were taken at 100-foot intervals during the lowering of a pressure-sealed maximum-reading thermometer into the well (Wallace deLaguna, personal communication, 1956). According to these measurements, the temperature of the ground water at various depths ranged from 50.8°F at 200 feet to 59.7°F at a depth of 1,426 feet. The initial temperature measurement was made at a depth of 100 feet, where the ground-water temperature was 51.0°F. The temperature decreased slightly to 50.8°F at a depth of 200 feet but gradually increased to 51.7°F at 500 feet. Below a depth of 500 feet, the measurements indicate an approximate thermal gradient averaging 1 degree of rise for each 124 feet of vertical descent. On the basis of these measurements, the effect of surface influences on the temperature of ground water apparently is greatly reduced below a depth of about 300 feet.

Whereas the earth's temperature gradient can be considered essentially constant at any one place, it does differ from place to place. Within Suffolk County the geothermal gradient is probably about the same everywhere. However, the ground-water temperature differs slightly from place to place, being subject to the geologic, hydrologic, and hydraulic factors affecting ground-water recharge, discharge, and movement. Differences in screened depth of wells, the season of the year, and the proximity to warmer or colder surface-water supplies available for recharge, as well as climatic differences, account for most or all of the variations in ground-water temperature shown in table 2.

Ground-water temperatures measured at wells less than 300 feet deep in Suffolk County span a range from 45°F at wells S4105-S4106 (pl. 1, E-12) in Ronkonkoma to 64°F at well S1396 (pl. 1, G-26) in Montauk. For the most part, the temperature of shallow ground water in Suffolk County is between 50° and 55°F. Temperatures of waters sampled from wells deeper than 300 feet ranged from 50.4° at well S3639 (466 feet deep; pl. 1, E-10) in Northport to 64°F at well S12 (314 feet deep; pl. 1, B-9) in Jones Beach.

Infiltration of water from the Peconic River into the adjacent upper Pleistocene deposits is suggested by the water temperatures measured at nearby shallow wells S1319-23 (90-115 feet deep; pl. 1, F-17). This well field is less than 600 feet from the Peconic River. More than 200 million gallons is pumped annually. The water temperatures ranged from 53.2°F (March 21, 1946) to 55.5°F (July 13, 1950). The temperatures measured at these wells are higher than those measured at other wells of comparable depth in the area, and are high for the region as a whole. In 1951 the observed temperature of the Peconic River ranged from 38°F (November 11, 1951) to 76.5°F (July 30, 1951), and doubtless has a generally comparable temperature fluctuation each year. River water drawn into the water-bearing sands under the influence of pumping is combined with formation water in the pumped well. The resultant water temperature depends upon the relative amounts of water from each source. Presumably the higher-than-average temperature of the well water is due to a higher rate of pumping in the summer, to the fact that warm water travels more easily through the ground than cold, or to both.

Measurements of ground-water temperature made to date indicate that in most areas of Suffolk County the ground-water temperature is low enough for all types of cooling purposes. Coverage, however, has been limited to wells sampled for other purposes, and therefore the temperature data are not uniformly distributed. Few data on ground-water temperature have been collected in large areas of potential industrial development in the central and west-

ern parts of Suffolk County. Additional determinations of temperature at scattered wells and periodic measurements at selected wells to establish periodic or long-term changes are needed to improve the usefulness of other ground-water data.

WELL-NUMBERING SYSTEM

Wells on Long Island, N. Y., are identified by a numbering system set up by the Water Power and Control Commission of New York State. Each well number is prefixed by the initial letter of the county in which it is located. Thus for wells in Suffolk County this prefix would be the letter S, as in the well number S3042.

For the most part, wells drilled prior to 1932 and appearing in the early published reports of the Geological Survey have been subsequently assigned numbers under the current system. Thus the well number S490 is the current number assigned to the well V892, described by Veatch (1906, p. 330).

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Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953.

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S3	D-8	Irr	288	M	1946	1	8	Mar. 28, 1946		
S8	E-8	PS	600	L	1932-47	3	4.4	Sept. 3, 1947	4.2	Oct. 10, 1932 Nov. 10, 1933
S9	E-8	D	570	L	1938-50	6	7	Feb. 17, 1950	3.6	July 3, 1940
S12	B-9	D	314	M	1933-52	13	17	April 3, 1939	6	April 27,1938 May 20, 1938
S27	E-8	PS	240	uP	1946-47	2	12	Mar. 26, 1946	10.2	Sept. 3, 1947
S29	E-8	PS	277	uP	1946	1	12	Mar. 26, 1946		
S31	E-9	PS	245	uP	1934-46	3	6	July 18, 1946	4.7	May 1, 1934
S40	B-12	PS	420	M	1932	1	4	Oct. 26, 1932		
S48	E-10	D	742	L	1938-52	9	6	April 1, 1938 Sept. 25, 1940 Oct. 28, 1942 Mar. 27, 1946	4.6	Mar. 4, 1952
S49	E-10	D	763	L	1938-52	9	6	April 1, 1938 Sept. 25, 1940 Oct. 28, 1942 Mar. 27, 1946	4.6	Feb. 4, 1952
S50	E-10	D	225	uP	1947-46	8	12	Mar. 27, 1946	6	Dec. 15, 1937 Feb. 17, 1938 April 1, 1938
S51	E-10	PS	553	M	1932	1	6.8	Oct. 10, 1932		
S55	B-11	PS	400	M	1932	1	3.8	Oct. 26, 1932		
S60	D-11	D	830	M	1932-46	2	5	Mar. 20, 1946	3.8	Oct. 12, 1932
S62	D-10	PS	200	uP	1946-47	2	8	Mar. 6, 1946	4.8	Sept. 5, 1947
S65	E-11	PS	153	uP	1946	1	8	Mar. 15, 1946		
S112	F-13	PS	245	M	1950	1	9	May 16, 1950		
S113	F-13	PS	334	M	1950	1	9	May 16, 1950		
S114	F-13	PS	333	M	1950	1	9	May 16, 1950		
S131	G-26	Ind	99	uP	1946	1	36	Aug. 26, 1946		
S153	D-18	PS	269	M	1932-33	3	34	Oct. 11, 1932 Aug. 15, 1933 Nov. 15, 1933		
S169	G-20	PS	90	uP	1933-52	4	36	July 11, 1950 July 7, 1952	24	Sept. 13, 1949
S170	G-20	PS	168	uP	1949-52	3	40	Sept. 13, 1949	36	July 11, 1950 July 7, 1952
S177	H-21	PS	71	uP	1933	1	28	Nov. 16, 1933		
S178	H-21	PS	55	uP	1932-33	3	68	Aug. 15, 1933	45	Oct. 11, 1932

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S184	F-22	PS	139	uP	1946	1	14	Mar. 19, 1946		
S189	H-22	T	668	L	1935	1	7600	1935		
S197	H-21	PS	27.3	uP	1937-39	12	80	Nov. 9, 1937	19	Aug. 1, 1938
S198	G-21	PS	50.3	uP	1937-39	12	14	Sept. 6, 1938	9	Jan. 20, 1938
S199	G-21	PS	16	uP	1937-39	12	19	Sept. 6, 1938	11	Nov. 10, 1937 Aug. 1, 1938
S200	H-21	PS	a	uP	1937-39	10	23	Aug. 1, 1938	11	Oct. 13, 1937
S301	D-11	D	40	uP	1946	1	3	Mar. 20, 1946		
S527	F-17	D	132.5	uP	1945-48	4	20	Aug. 22, 1945 Aug. 14, 1947 Aug. 30, 1948	16	July 11, 1946
S552	F-17	D	113	uP	1945-48	3	20	July 11, 1946 July 30, 1948	19	Aug. 16, 1945
S620	F-18	D	79	uP	1945-48	4	42	July 26, 1948	15	Aug. 16, 1945
S638	F-18	D	89	uP	1945-48	4	17	Sept. 1, 1948	15	Aug. 16, 1945
S644	F-17	D	158	uP	1945-48	3	26	July 30, 1948	15	Aug. 23, 1945 Aug. 12, 1947
S681	F-18	Irr	255	M	1945-47	3	65	Aug. 14, 1947	11	Aug. 21, 1945
S715	D-11	D	865	M	1928-46	2	11	Mar. 20, 1946	3.4	Feb. 8, 1928
S716	F-18	D	223	M	1945-49	10	54	Aug. 4, 1948	10	Aug. 30, 1949
S721	F-24	PS	94	uP	1946	1	30	Mar. 13, 1946		
S738	E-17	D	a	uP	1945-48	4	32	Aug. 5, 1945	8	July 18, 1946 Aug. 14, 1947
S742	F-16	D	90	uP	1953	1	22	Mar. 3, 1953		
S848	F-9	D	80	uP	1943	1	430	Mar. 15, 1943		
S871	C-13	PS	104	uP	1946-47	2	12	Mar. 13, 1946	7.2	Sept. 4, 1947
S872	C-13	PS	104	uP	1946-47	2	12	Mar. 13, 1946	7.2	Sept. 4, 1947
S874	E-9	PS	144	uP	1946	1	14	Mar. 15, 1946		
S932	F-16	D	a	uP	1945-48	3	26	Aug. 4, 1948	20	Aug. 14, 1947
S933	D-14	Irr	a	uP	1949	1	8	Nov. 1, 1949		
S1029	F-18	D	a	uP	1945-48	3	28	July 15, 1946	20	July 27, 1948
S1039	F-9	D	91	M	1943	1	4.9	Mar. 15, 1943		
S1087	E-19	PS	a	uP	1950	1	15	Aug. 4, 1950		
S1097	F-17	D	82.5	uP	1945-48	4	51	Aug. 18, 1945	32	July 27, 1948
S1099	F-13	D	204	uP	1945-47	2	9	Aug. 15, 1947	4	Aug. 25, 1945

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record Cl (ppm)	Highest of record Date	Lowest of record Cl (ppm)	Lowest of record Date
S1100	F-17	D	a	uP	1945-49	5	32	Aug. 17, 1945	20	July 11, 1946
S1128	F-16	D	a	uP	1945-48	4	18	Aug. 18, 1945	14	July 30, 1948
S1129	F-16	D	a	uP	1945-48	4	20	Aug. 14, 1947	14	Aug. 17, 1945
S1215	F-17	Irr	115	uP	1945-48	4	22	July 11, 1946 July 27, 1948	19	Aug. 17, 1945 Aug. 12, 1947
S1232	F-18	Irr	65	uP	1946-48	3	24	July 10, 1946 Aug. 21, 1948	20	Aug. 12, 1947
S1259	F-16	D	a	uP	1946-48	3	24	Aug. 11, 1948	18	July 17, 1946
S1277	E-19	D	41	uP	1945-48	4	15	Sept. 1, 1948	2	Aug. 23, 1945
S1303	E-8	PS	50	uP	1946	1	16	Mar. 15, 1946		
S1306	E-8	PS	50	uP	1946	1	16	Mar. 15, 1946		
S1311	E-8	PS	50	uP	1946	1	16	Mar. 15, 1946		
S1313	E-8	PS	570	L	1946	1	10	Mar. 15, 1946		
S1318	E-19	PS	a	uP	1934-50	2	22	Aug. 4, 1950	8	Sept. 17, 1934
S1319-S1323	F-17	PS	90-115	uP	1932-53	7	12	Mar. 21, 1946 Sept. 19, 1949	5.5	Oct. 11, 1932
S1326-S1330	C-8	PS	60	uP	1946-47	2	12	Mar. 4, 1946	7.8	Sept. 5, 1947
S1331	D-14	PS	60	uP	1946	1	12	Mar. 14, 1946		
S1336	F-13	PS	95	uP	1946	1	10	Mar. 15, 1946		
S1340	E-21	PS	85	uP	1946	1	22	Mar. 18, 1946		
S1345	D-18	PS	46	uP	1946	1	12	Mar. 18, 1946		
S1347-S1349 (See S4038 - S4043)	D-18	PS	40-46	uP	1947	1	5.8	Sept. 4, 1947		
S1350 (See S1660 - S1664)	C-10	PS	60	uP	1946	1	6	Mar. 14, 1946		
S1373	G-26	Ind	49.5	uP	1946	1	880	Aug. 26, 1946		
S1396	G-26	Ind	50	uP	1946	1	6	Aug. 26, 1946		
S1424	F-18	Irr	a	uP	1946-53	8	32	July 1, 1953	20	July 15, 1946
S1445	D-9	Irr	183	M	1945-47	2	11	Aug. 18, 1947	9	Aug. 24, 1945
S1481	F-17	PS	138	uP	1945-48	4	21	July 27, 1948	14	July 11, 1946
S1610	F-18	Irr	93	uP	1946-48	2	38	July 28, 1948	30	July 10, 1946
S1660-S1664 (See S1350)	C-10	PS	60	uP	1946	1	6	Mar. 14, 1946		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S1667	F-22	PS	60	uP	1950	1	15	May 16, 1950		
S1668	H-21	PS	35	uP	1946-51	6	94	Mar. 22, 1946	76	July 8, 1950
S1669	H-21	PS	a	uP	1949-50	2	153	July 7, 1950	135	Aug. 25, 1949
S1673-S1678	H-21	PS	55	uP	1945-52	6	424	Aug. 24, 1949	123	July 7, 1950
S1679	E-19	PS	60	uP	1941-50	3	240	Sept. 22, 1941	14	Aug. 4, 1950
S1691-S1700 (See S4003 - S4022)	C-10	PS	57	uP	1946-47	2	8	Mar. 13, 1946	7.2	Sept. 4, 1947
S1721	D-10	D	162	uP	1946	1	6	Mar. 20, 1946		
S1776	F-17	Irr	130	uP	1945-48	4	32	Aug. 17, 1945	10	July 28, 1948
S1777	F-17	Irr	92	uP	1945-48	4	12	July 28, 1948	8	Aug. 17, 1945
S1790	F-18	Irr	84	uP	1945-48	5	30	Aug. 16, 1945 Aug. 16, 1946	20	Aug. 13, 1947 July 26, 1948
S1791	F-18	D	a	uP	1945-47	4	36	Aug. 16, 1945 Aug. 16, 1946	20	July 15, 1946
S1818	G-19	Irr	113	uP	1945-52	7	42	July 7, 1952	24	July 17, 1946
S1822	F-16	Irr	136	uP	1945-48	4	16	Aug. 9, 1948	10	Aug. 16, 1945 Aug. 14, 1947
S1838	F-17	Irr	133	uP	1945-49	10	24	Aug. 16, 1949	14	Aug. 16, 1945
S1842	E-9	Irr	445	M	1947	1	15	Aug. 15, 1947		
S1892	F-17	Irr	98	uP	1945-50	6	28	Aug. 14, 1947 Aug. 12, 1948	24	July 3, 1950
S1912	F-16	D	a	uP	1945-50	11	24	Aug. 16, 1949 Aug. 30, 1949	15	July 11, 1946
S1926	F-17	D	a	uP	1945-46	2	24	Aug. 22, 1945	4	July 11, 1946
S1929	F-17	Irr	155	uP	1946-50	5	20	Sept. 19, 1949	16	July 13, 1950
S1930	F-17	D	a	uP	1946-48	3	26	July 28, 1948	18	July 11, 1946
S1931	F-17	D	a	uP	1946-48	3	26	July 28, 1948	20	July 11, 1946 Aug. 14, 1947
S1951	E-9	Irr	488	M	1945-47	2	8	Aug. 18, 1947	6	Aug. 25, 1945
S2010	F-17	PS	162	uP	1945-50	5	22	July 11, 1946 July 27, 1948	10	Aug. 23, 1945
S2017	F-17	PS	135	uP	1945-48	4	20	Aug. 12, 1947	13	Aug. 22, 1945
S2018	F-17	D	59	uP	1945-48	4	49	Aug. 23, 1945	26	Aug. 12, 1947

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordi-[1]	Use[2]	Depth (feet)	Geologic source[3]	Period of record (years)	Number of samples	Highest of record[4] Cl (ppm)	Highest of record[4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S2099	F-17	D	a	uP	1945-50	6	40	Sept. 19, 1949	14	Sept. 4, 1945
S2150	G-27	PS	70	uP	1946	1	18	Mar. 13, 1946		
S2229	G-26	PS	84	uP	1946	1	35	July 27, 1946		
S2331	F-18	D	a	uP	1945-48	4	24	July 26, 1948	14	July 15, 1946
S2365	E-18	D	a	uP	1945-48	3	16	July 17, 1946	8	Sept. 4, 1945
S2370	F-18	D	a	uP	1945-48	4	22	July 30, 1948	15	Aug. 23, 1945
S2374	E-18	D	56	uP	1945-46	2	12	Aug. 21, 1945 July 17, 1946		
S2402	F-23	PS	75	uP	1946	1	16	Mar. 3, 1946		
S2467-S2468, S2475	D-14	D	a	uP	1949	1	8	Nov. 1, 1949		
S2476	E-15	D	101	uP	1948-53	3	12	May 10, 1948	5.1	Dec. 21, 1948
S2485	E-15	D	75	uP	1948-52	3	6	Dec. 5, 1950	4	Mar. 7, 1952
S2534	F-17	PS	146	uP	1945-48	4	30	Aug. 12, 1947	18	July 11, 1946
S2570	F-23	PS	90	uP	1946	1	16	Mar. 3, 1946		
S2586	F-16	D	146	uP	1945-48	4	16	Aug. 30, 1948	11	Aug. 16, 1945
S2587	F-16	D	a	uP	1945-48	4	20	Aug. 12, 1947	13	Aug. 16, 1945
S2588	F-16	D	a	uP	1946-48	3	18	Aug. 30, 1947	14	July 11, 1946
S2645	F-16	PS	a	uP	1946-47	2	12	July 11, 1946	10	Aug. 12, 1947
S2654	F-17	Irr	140	uP	1945-48	4	30	Aug. 13, 1947	19	Aug. 18, 1945
S2676	F-19	Irr	59	uP	1948-52	4	42	July 7, 1952	12	Sept. 14, 1949
S2778	F-18	D	a	uP	1945-47	3	20	Aug. 12, 1947	15	Aug. 17, 1945
S2815	D-16	D	a	uP	1950-52	3	12	Mar. 3, 1950	6	Nov. 21, 1952
S2838	F-18	D	a	uP	1945-48	4	33	Aug. 16, 1945	20	Aug. 16, 1948
S2840	F-16	D	a	uP	1945-48	3	15	Aug. 14, 1947 Aug. 31, 1948	14	Aug. 17, 1945
S2978 (See S3012)	E-9	PS	271	uP	1946-47	2	6	Mar. 27, 1946	5.2	Sept. 3, 1947
S2984	C-10	O	a	uP	1941-42	10	9	Jan. 17, 1942	4	Dec. 13, 1941
S3002	F-16	D	a	uP	1945-48	4	19	Aug. 14, 1947	10	Aug. 16, 1945
S3003	F-17	PS	114	uP	1945	1	17	Aug. 22, 1945		
S3012 (See S2978)	E-9	PS	181	uP	1946-47	2	6	Mar. 27, 1946	5.2	Sept. 3, 1947

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S3045	G-20	PS	55	uP	1946-52	4	40	Sept. 13, 1949	30	Mar. 22, 1946
S3046	F-18	D	a	uP	1945-48	4	28	Aug. 16, 1945 Aug. 13, 1948	14	July 16, 1946
S3062	G-26	PS	54	uP	1946	1	24	July 27, 1946		
S3069	E-18	D	a	uP	1945-49	5	20	Sept. 22, 1949	10	Aug. 14, 1947
S3090	F-18	D	a	uP	1945-48	4	24	July 30, 1948	17	Aug. 18, 1945
S3197	E-15	D	135	uP	1948-53	3	7	Dec. 15, 1950	4	Jan. 9, 1953
S3277	F-18	D	a	uP	1945-48	4	34	July 15, 1946	23	Aug. 18, 1945
S3278	F-18	D	a	uP	1945-48	4	17	Aug. 23, 1945	14	July 16, 1946 July 30, 1948
S3405	E-15	PS	65	uP	1948-53	3	6	July 16, 1951	5	Jan. 15, 1953
S3418	E-18	D	55	uP	1945-46	2	10	Aug. 21, 1945	8	July 17, 1946
S3487	F-18	D	91	uP	1945	1	23	Aug. 2, 1945		
S3554	F-9	D	106	M	1943	1	35	Mar. 12, 1943		
S3570	F-17	Irr	160	uP	1945-48	4	30	Aug. 14, 1947	18	Aug. 21, 1945 July 16, 1946
S3588-S3589	G-20	Irr	a	uP	1948	1	26	Sept. 14, 1946		
S3615	G-26	PS	111	uP	1946	1	30	Mar. 13, 1946		
S3627	F-18	D	75	uP	1945-48	4	112	Aug. 23, 1945	28	July 10, 1946 Aug. 12, 1947
S3634	F-18	D	a	uP	1945-48	4	40	Aug. 30, 1948	30	Aug. 23, 1945
S3639	E-10	D	466	M	1946	1	12	Mar. 27, 1946		
S3658	G-26	PS	70	uP	1946	1	28	Mar. 13, 1946		
S3697	H-21	PS	a	uP	1949-52	5	30	July 7, 1950 July 9, 1952	22	Aug. 25, 1949
S3698	H-21	PS	a	uP	1949-50	2	28	Aug. 25, 1949	27	July 7, 1950
S3705	F-18	Irr	a	uP	1948	1	25	Aug. 16, 1948		
S3716	F-17	D	a	uP	1946-48	3	20	Aug. 12, 1947 Aug. 4, 1948	12	July 10, 1946
S3720	F-17	D	116	uP	1945-48	4	66	July 29, 1948	34	July 11, 1946
S3721	F-17	Irr	90	uP	1945-49	9	30	Aug. 10, 1948	18	July 16, 1946
S3722	F-17	Irr	110	uP	1945-48	4	20	Aug. 13, 1947 Aug. 13, 1948	18	Aug. 21, 1945 July 16, 1946
S3723	G-20	Irr	a	uP	1948	1	35	Sept. 13, 1948		
S3725	G-26	PS	71	uP	1946	1	28	Mar. 13, 1946		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S3726	G-26	PS	70	uP	1946	1	28	Mar. 13, 1946		
S3764	F-18	Irr	54	uP	1946-48	3	40	Aug. 13, 1947	28	July 18, 1946 July 26, 1948
S3765	F-17	Irr	54	uP	1945-48	3	28	Aug. 4, 1948	18	Aug. 21, 1945
S3766	F-18	D	a	uP	1945-46	2	24	July 16, 1946	11	Aug. 21, 1945
S3767	F-17	Irr	74	uP	1945-48	4	22	July 28, 1948	17	Aug. 21, 1945
S3768	F-18	T	a	uP	1947	1	30	Aug. 14, 1947		
S3779	F-19	Irr	a	uP	1948	1	24	Aug. 16, 1948		
S3789	F-17	Irr	a	uP	1946-47	2	30	July 11, 1946	22	Aug. 12, 1947
S3800	E-10	PS	170	uP	1946	1	10	Mar. 15, 1946		
S3813-S3815	C-12	PS	a	uP	1946-47	2	8	Mar. 14, 1946	5.6	Sept. 4, 1947
S3824	F-18	Irr	a	uP	1945-49	5	30	Aug. 12, 1947	26	July 10, 1946
S3831	D-11	D	876	M	1946	1	6	Mar. 20, 1946		
S3832	D-11	D	779	M	1946	1	5	Mar. 20, 1946		
S3835	D-11	D	843	M	1946	1	6	Mar. 20, 1946		
S3845	F-17	D	a	uP	1945-48	4	29	Aug. 11, 1948	18	Aug. 15, 1945
S3876	F-18	Irr	78	uP	1945-47	3	26	July 16, 1946	20	Aug. 21, 1945
S3878	F-17	Irr	86	uP	1946-48	3	20	July 16, 1946 Aug. 14, 1947 Aug. 16, 1948		
S3941	E-16	Irr	a	uP	1945-48	4	25	Aug. 15, 1945	18	July 17, 1946
S3958	F-17	Irr	110	uP	1945-48	4	20	Aug. 14, 1947 July 30, 1948	18	Aug. 18, 1945 July 17, 1946
S3966	F-19	Irr	a	uP	1948-52	9	23	Sept. 3, 1948	17	July 12, 1949
S3980-S4002	D-13	PS	63	uP	1946	1	18	Mar. 13, 1946		
S4003-S4022 (See S1691)	C-10	PS	55	uP	1946-47	2	8	Mar. 13, 1946	7.2	Sept. 4, 1947
S4025	F-18	D	a	uP	1945-48	4	30	Aug. 15, 1947	20	July 12, 1946
S4027	G-19	Irr	a	uP	1945-48	4	38	Sept. 4, 1945	28	July 17, 1946 Aug. 16, 1948
S4028	C-10	PS	50	uP	1946	1	12	Mar. 13, 1946		
S4031 (See S4831)	C-10	PS	a	uP	1947	1	6.2	Sept. 29, 1947		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	[1] Map coordinate	[2] Use	Depth (feet)	[3] Geologic source	Period of record (years)	Number of samples	[4] Highest of record Cl (ppm)	Highest of record Date	Lowest of record Cl (ppm)	Lowest of record Date
S4038-S4043 (See S1347 - S1349)	D-18	PS	46	uP	1947	1	5.8	Sept. 4, 1947		
S4048	F-17	Irr	172	uP	1946-48	2	26	July 27, 1948	16	July 11, 1946
S4066	F-17	Irr	a	uP	1946-48	3	30	Aug. 3, 1948	25	Aug. 13, 1947
S4067	F-17	Irr	a	uP	1945-48	4	26	July 27, 1948	20	Aug. 14, 1947
S4068	F-17	Irr	a	uP	1945-48	4	40	Aug. 18, 1945	30	July 16, 1946 Aug. 13, 1947 Aug. 3, 1948
S4077	F-17	Irr	a	uP	1945-48	3	22	July 17, 1946 Aug. 11, 1948	20	Aug. 15, 1945
S4078	F-17	Irr	a	uP	1945-48	3	24	Aug. 11, 1948	6	July 17, 1946
S4079	F-18	Irr	a	uP	1945-48	3	26	July 30, 1948	25	Aug. 18, 1945 Aug. 15, 1947
S4080	F-17	Irr	70	uP	1946-48	3	22	July 17, 1946	12	Aug. 11, 1948
S4081	F-19	Irr	117	uP	1945-48	4	36	Aug. 16, 1948	27	Aug. 22, 1945
S4082	F-18	Irr	a	uP	1945-49	5	28	Sept. 1, 1949	22	July 16, 1946
S4083	F-16	Irr	a	uP	1945-48	4	20	Aug. 14, 1947	9	Aug. 15, 1945
S4084	F-18	Irr	60	uP	1945-47	3	34	Aug. 17, 1945	10	July 11, 1946
S4086	F-17	Irr	a	uP	1946-48	3	26	July 28, 1948	18	July 16, 1946 Aug. 14, 1947
S4087	F-17	Irr	117	uP	1945-48	4	28	Aug. 10, 1948	16	July 17, 1946
S4088	F-17	Irr	111	uP	1945-48	4	30	Aug. 10, 1948	20	Aug. 15, 1945
S4089	F-17	Irr	58	uP	1945-48	4	25	Aug. 13, 1947	19	Aug. 21, 1945
S4090	F-17	Irr	113	uP	1945-48	4	30	Aug. 21, 1945	11	Aug. 14, 1947
S4091	G-20	Irr	45	uP	1945-52	7	918	July 9, 1952	24	Sept. 5, 1945
S4091R	G-20	Irr	45	uP	1953	1	34	July 25, 1953		
S4097	F-17	Irr	140	uP	1945-48	4	23	Aug. 4, 1948	18	Aug. 21, 1945 July 11, 1946 Aug. 12, 1947
S4105-S4106	E-12	PS	68	uP	1946	1	20	Mar. 7, 1946		
S4112	D-8	D	84	uP	1946	1	6	Mar. 28, 1946		
S4116	F-18	Irr	124	uP	1945-48	4	30	Sept. 1, 1948	24	July 10, 1946
S4122	F-18	Irr	86	uP	1945-48	3	30	July 26, 1948	16	Aug. 16, 1945
S4123	F-18	Irr	69	uP	1945-53	6	30	Sept. 2, 1948 July 1, 1953	22	July 18, 1946 July 10, 1952

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S4124	F-17	Irr	73	uP	1945-48	4	20	Aug. 10, 1948	13	Aug. 15, 1945
S4125	F-17	Irr	96	uP	1945-48	4	12	Aug. 5, 1948	9	Aug. 23, 1945
S4134T	F-17	O	225	M	1947	1	8	Aug. 15, 1947		
S4135	H-21	Irr	70	uP	1948-52	10	36	Aug. 30, 1949	24	July 18, 1949 July 7, 1950
S4143	F-19	Irr	45	uP	1946-48	3	26	Sept. 9, 1948	22	July 18, 1946 Aug. 13, 1947
S4145	E-11	D	190	uP	1947	1	3.6	Sept. 10, 1947		
S4163	G-20	PS	45	uP	1949-52	3	134	July 9, 1952	36	July 11, 1950
S4194	F-17	Irr	83	uP	1948-50	3	30	Sept. 16, 1949	25	July 13, 1950
S4195	D-15	Irr	71	uP	1947-48	2	12	Aug. 5, 1947 July 28, 1948		
S4231	F-19	D	a	uP	1948	1	17	Sept. 2, 1948		
S4237	E-16	Irr	72	uP	1948	1	10	Sept. 2, 1948		
S4239	G-20	Irr	70	uP	1945-53	8	36	July 9, 1952	25	July 11, 1950
S4240	F-18	Irr	48	uP	1945-48	4	30	Sept. 8, 1945 Sept. 1, 1948	28	July 16, 1946 Aug. 13, 1947
S4352	F-19	Irr	67	uP	1948	1	28	Sept. 3, 1948		
S4372	F-13	PS	100	uP	1947	1	5	Sept. 10, 1947		
S4413	G-19	Irr	52	uP	1945-49	5	30	Sept. 4, 1945	20	July 17, 1946 Aug. 13, 1947
S4415	F-16	Irr	90	uP	1948	1	21	Aug. 11, 1948		
S4416	F-16	Irr	130	uP	1947-48	2	12	Aug. 30, 1948	10	Aug. 15, 1947
S4417	F-17	Irr	a	uP	1948	1	18	Aug. 5, 1948		
S4421	F-16	Irr	151	uP	1948	1	18	Aug. 30, 1948		
S4422	F-16	Irr	125	uP	1948	1	25	Aug. 30, 1948		
S4473	F-18	Irr	a	uP	1948	1	30	Sept. 2, 1948		
S4474	G-20	Irr	a	uP	1948-50	6	30	Sept. 9, 1948	24	Aug. 2, 1949 Aug. 15, 1949
S4484	G-21	Irr	51	uP	1948-52	5	35	Sept. 14, 1948	24	Sept. 14, 1949
S4501	F-14	PS	140	uP	1950	1	60	May 16, 1950		
S4511	F-18	Irr	103	uP	1948	1	21	July 29, 1948		
S4512	F-18	Irr	114	uP	1948	1	30	Sept. 7, 1948		
S4513	F-18	D	90	uP	1948	1	20	Aug. 5, 1948		
S4514	F-17	Irr	146	uP	1948	1	17	Aug. 31, 1948		
S4537	E-18	Irr	97	uP	1947-48	2	15	Aug. 15, 1947	12	Sept. 1, 1948

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	[1] Map coordinate	[2] Use	Depth (feet)	[3] Geologic source	Period of record (years)	Number of samples	Highest of record Cl (ppm)	[4] Highest of record Date	Lowest of record Cl (ppm)	Lowest of record Date
S4543	F-17	Irr	150	uP	1948	1	25	Aug. 31, 1948		
S4544	F-16	Irr	168	uP	1948	1	34	Aug. 30, 1948		
S4547	F-19	Irr	a	uP	1948	1	28	Sept. 12, 1948		
S4551	F-17	Irr	180	uP	1948-50	3	28	Sept. 16, 1949	8	July 13, 1950
S4565	G-20	Irr	a	uP	1948-50	2	25	Sept. 10, 1948	19	July 14, 1950
S4566	F-19	Irr	a	uP	1948-52	6	30	Aug. 2, 1949	24	July 10, 1952
S4576	F-19	Irr	94	uP	1948-49	2	32	Sept. 8, 1948 Aug. 29, 1949		
S4580	G-20	Irr	55	uP	1948	1	45	Sept. 10, 1948		
S4585	F-19	Irr	a	uP	1948	1	24	Sept. 3, 1948		
S4617	F-18	Irr	70	uP	1948	1	28	Aug. 13, 1948		
S4618	G-20	Irr	a	uP	1948	1	36	Sept. 10, 1948		
S4620	F-18	Irr	a	uP	1948	1	24	Aug. 5, 1948		
S4621	D-14	Irr	107	uP	1949	1	6	Nov. 1, 1949		
S4666	E-15	Irr	a	uP	1947-48	2	25	Aug. 15, 1947	24	July 28, 1948
S4676	F-18	Irr	104	uP	1948	1	24	Sept. 2, 1948		
S4725	G-19	Irr	108	uP	1948-53	6	26	Aug. 2, 1949	22	Sept. 8, 1948
S4761	B-12	PS	530	M	1950	1	9.6	May 16, 1950		
S4795	F-18	Irr	a	uP	1948	1	25	Aug. 30, 1948		
S4825	E-16	Irr	54	uP	1948	1	18	Oct. 4, 1948		
S4831 (See S4031)	C-10	PS	a	uP	1947	1	6.2	Sept. 29, 1947		
S4944	F-16	Irr	a	uP	1948	1	19	Aug. 12, 1948		
S5012	F-18	Irr	70	uP	1947-49	3	65	Aug. 14, 1947	12	Sept. 19, 1949
S5068	E-9	PS	190	M	1947	1	5.8	Sept. 3, 1947		
S5115	F-17	Irr	a	uP	1948	1	21	Aug. 10, 1948		
S5189	G-20	Irr	a	uP	1948	1	32	Sept. 8, 1948		
S5208	G-20	Irr	55	uP	1948	1	20	Sept. 10, 1948		
S5234	E-15	D	110	uP	1948	3	4.8	Dec. 21, 1948	4.2	Oct. 15, 1948
S5317	F-17	D	a	uP	1948	1	14	Aug. 10, 1948		
S5341	F-17	D	125	uP	1948-49	4	24	Dec. 14, 1949	19	June 17, 1948
S5344	F-17	Irr	40	uP	1948	1	30	Aug. 13, 1948		
S5362	E-15	D	a	uP	1948-49	2	6.8	July 29, 1949	5.1	May 27, 1948
S5366	F-17	Irr	a	uP	1948	1	28	Aug. 9, 1948		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S5475-S5476	F-20	Irr	30	uP	1948-50	2	103	July 11, 1950	37	Sept. 13, 1948
S5503	F-19	Irr	a	uP	1948	1	34	Sept. 8, 1948		
S5518	E-15	D	54	uP	1948-49	3	5	Oct. 15, 1948	4.5	Aug. 3, 1949
S5602	G-19	Irr	110	uP	1948	1	26	Sept. 8, 1948		
S5615	F-22	Irr	165	uP	1949	1	27	July 7, 1949		
S5625	F-18	Irr	82	uP	1948	1	28	Aug. 13, 1948		
S5665	F-19	Irr	46	uP	1948-53	5	34	Sept. 14, 1949	22	July 1, 1953
S5707	F-17	Irr	a	uP	1948	1	29	Aug. 13, 1948		
S5708	F-16	Irr	94	uP	1948	1	25	Aug. 13, 1948		
S6028	F-18	Irr	121	uP	1948-50	6	28	Aug. 15, 1949	21	July 13, 1950
S6029	F-17	Irr	a	uP	1948	1	23	Aug. 12, 1948		
S6038	G-20	Irr	a	uP	1948	1	20	Sept. 9, 1948		
S6059	G-20	Irr	78	uP	1948-53	4	1600	June 30, 1953	48	Sept. 15, 1949
S6119	G-19	Irr	a	uP	1948-53	5	28	Sept. 13, 1949	24	July 11, 1950 July 7, 1952
S6148	G-20	Irr	80	uP	1948-49	2	28	Aug. 25, 1949	24	Sept. 9, 1948
S6149	G-20	Irr	85	uP	1948-52	10	36	Aug. 25, 1949	24	Aug. 30, 1949
S6150	F-19	Irr	a	uP	1948	1	20	Sept. 7, 1948		
S6190	G-19	Irr	a	uP	1948	1	27	Sept. 7, 1948		
S6192	G-19	Irr	a	uP	1948	1	25	Sept. 9, 1948		
S6193	G-20	Irr	75	uP	1948-50	4	30	Aug. 2, 24, 1949 July 12, 1950	25	Sept. 13, 1948
S6405	E-15	T	50	uP	1948-53	3	10	Mar. 3, 1953	5.9	Oct. 18, 1948
S6406	E-15	T	50	uP	1949-52	3	8	Feb. 2, 1951	4.1	Oct. 14, 1949
S6407	E-15	T	34	uP	1948-53	3	7	Dec. 17, 1948	4	Sept. 14, 1951
S6409	E-15	O	1434	L	1948	1	4.1	Nov. 8, 1948		
S6425	E-15	T	85	uP	1949-52	3	5	Aug. 24, 1951	4	Sept. 25, 1952
S6426	E-15	T	85	uP	1950-52	3	7	Nov. 13, 1950	5	Nov. 28, 1952
S6432	E-15	T	156	uP	1948	1	4.4	Dec. 17, 1948		
S6434	E-15	O	1600	L	1949	1	5.6	June 2, 1949		
S6456	E-15	T	217	M	1949	1	7.1	Sept. 13, 1949		
S6471	E-15	T	14	uP	1949	1	3.8	July 29, 1949		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Continued).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record Cl (ppm)	Highest of record Date [4]	Lowest of record Cl (ppm)	Lowest of record Date
S6697	E-15	D	100	uP	1950-52	3	7	Nov. 13, 1950	5	Nov. 28, 1952
S6779	G-19	Irr	a	uP	1948-53	5	38	Sept. 14, 1949	25	July 1, 1953
S6780	F-19	Irr	a	uP	1948-53	8	25	Aug. 2, 1949 Sept. 6, 1949	20	July 12, 1950
S6901	F-18	Irr	a	uP	1948	1	12	July 29, 1948		
S7117	E-21	Irr	a	uP	1949	1	22	July 6, 1949		
S7123	G-20	Irr	85	uP	1950	1	65	July 7, 1950		
S7168	H-22	Irr	33	uP	1948-50	5	42	Oct. 12, 1948	36	Sept. 18, 1949 July 6, 1950
S7169	H-22	Irr	26	uP	1948-49	2	62	Sept. 23, 1948	56	Sept. 15, 1949
S7170	H-22	Irr	23	uP	1948-52	9	78	July 7, 1952	52	Sept. 30, 1948
S7171-S7172	H-22	Irr	a	uP	1948-52	5	44	July 18, 1949	36	July 9, 1952
S7173	H-22	Irr	a	uP	1948-50	3	16	Sept. 14, 1949	12	July 6, 1950
S7174	H-22	Irr	a	uP	1949-50	2	24	Sept. 14, 1949	18	July 6, 1950
S7175	H-22	Irr	8	uP	1948-50	3	60	Sept. 14, 1949	41	July 6, 1950
S7176	H-22	Irr	11	uP	1948-49	7	1000	Sept. 30, 1948	350	Sept. 15, 1949
S7179	H-22	Irr	22	uP	1948-52	5	66	Sept. 30, 1948	38	Sept. 15, 1949
S7180	H-22	Irr	20	uP	1948-52	4	48	Sept. 30, 1948 Sept. 14, 1949 July 7, 1952	46	July 6, 1950
S7267	G-20	PS	a	uP	1948	1	20	Sept. 9, 1948		
S7269	F-18	D	a	uP	1948-50	3	30	Sept. 16, 1949	29	Aug. 21, 1948 July 12, 1950
S7293	E-21	Irr	a	uP	1949	1	28	July 6, 1949		
S7334	G-19	Irr	95	uP	1949	1	70	Summer 1949		
S7499	F-21	Irr	107	uP	1949	1	26	July 7, 1949		
S7569	E-19	PS	31	uP	1950	1	25	Aug. 4, 1950		
S7570	F-23	PS	163	uP	1949	1	9	July 7, 1949		
S7665	F-18	Irr	a	uP	1949	1	28	Summer 1949		
S7741	E-21	Irr	73	uP	1949	1	28	July 6, 1949		
S7870	H-22	Irr	16.5	uP	1950	1	48	July 6, 1949		
S7905	G-20	Irr	a	uP	1950-53	3	35	July 7, 1950	28	June 30, 1953
S8139	D-17	Irr	60	uP	1949	1	13	July 6, 1949		
S8778	H-22	Irr	a	uP	1950	1	24	July 6, 1950		

See footnotes at end of table.

Table 1.—Summary of chloride concentrations in well waters of Suffolk County, N. Y., 1928 - 1953—(Concluded).

Well number	Map coordinate [1]	Use [2]	Depth (feet)	Geologic source [3]	Period of record (years)	Number of samples	Highest of record [4] Cl (ppm)	Highest of record [4] Date	Lowest of record Cl (ppm)	Lowest of record Date
S9138	G-20	D	35	uP	1949	1	42	Dec. 14, 1949		
S9139	H-21	D	25	uP	1949	1	18	Dec. 14, 1949		
S9140	F-23	D	60	uP	1949	1	30	Dec. 14, 1949		
S9141	D-15	D	50	uP	1950-53	3	8	Mar. 21, 1952	4	Jan. 15, 1953
S9142	D-15	D	60	uP	1950-53	4	8	Feb. 5, 1951	5	April 11, 1952
S9143	D-15	D	30	uP	1950-53	3	5.2	Mar. 3, 1950	3	Feb. 9, 1953
S9144	D-16	D	40	uP	1951-53	3	50	Feb. 13, 1951	18	Feb. 16, 1953
S14597	H-22	D	a	uP	1949-50	2	835	Sept. 20, 1949	296	July 6, 1950
D-15	H-22	U	a	uP	1950	1	24	July 6, 1950		
LeKay	E-15	D	67	uP	1952	1	4	Nov. 21, 1952		

FOOTNOTES:

[1] See plate 1.

[2] Use of well indicated by symbols as follows:
- D Domestic or Institutional
- Ind Industrial
- Irr Agricultural
- O Observation
- PS Public Supply
- T Test Boring
- U Unused

[3] Water-bearing formation in which well is screened indicated by symbols as follows:
- uP upper Pleistocene
- M Magothy(?) formation
- L Lloyd sand member of Raritan formation

[4] Includes data where only one sample taken.

a Exact depth unknown; identity of formation tapped based on other evidence.

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53.

S3. (D-8.) New York State Institute of Applied Agriculture, Farmingdale.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 28, 1946	8	50.4

S8. (E-8.) New York Water Service Corp., Huntington.

Oct. 10, 1932	4.2	—
Nov. 12, 1933	4.2	—
Sept. 3, 1947	4.4	—

S9. (E-8.) Catholic Seminary, West Neck Ave., West Neck.

Nov. 23, 1938	5	56.0
Oct. 27, 1939	5	56.3
July 3, 1940	3.6	—
Sept. 25, 1940	5	—
Oct. 28, 1942	5	—
Feb. 17, 1950	7	—
May 17, 1950	—	56.3

S12. (B-9.) U. S. Coast Guard Station, Jones Beach.

May 2, 1933	7	64.0
Mar. 28, 1938	7	61.3
April 27, 1938	6	—
May 20, 1938	6	—
June 20, 1938	7	—
Sept. 20, 1938	7	—
April 3, 1939	17	—
June 29, 1939	9	—
Oct. 6, 1939	8	—
Jan. 24, 1940	8	—
Sept. 27, 1940	8	—
April 15, 1941	8	—
Dec. 30, 1952	7	—

S27. (E-8.) South Huntington Water District, No. 1, Huntington.

Mar. 26, 1946	12	—
Sept. 3, 1947	10.2	51.0

S29. (E-8.) South Huntington Water District, No. 3, South Huntington.

Mar. 26, 1946	12	51.5

S31. (E-9.) Greenlawn Water District, Rte. 25A, Centerport.

May 1, 1934	4.7	—
Oct. 27, 1939	5	—
July 18, 1946	6	51.0

S40. (B-12.) Village of Ocean Beach.

Date of collection	Chloride (ppm)	Temperature (°F)
Oct. 10, 1932	4	—

S48 - S49. (E-10.) U. S. Veteran's Facility, wells 1 and 2, Northport.

April 1, 1938	6	—
Nov. 23, 1938	5	52.4
Oct. 27, 1939	5	—
Sept. 25, 1940	6	—
Oct. 28, 1942	6	52.4
Mar. 27, 1946	6	50.9 (S48)
Mar. 27, 1946	5	51.0 (S49)
Feb. 4, 1952	4.6	— (S49)
Mar. 4, 1952	4.6	— (S48)

S50. (E-10.) U. S. Veteran's Facility, well 3, Northport.

Dec. 15, 1937	6	—
Feb. 17, 1938	6	51.0
April 1, 1938	6	50.9
Nov. 23, 1938	7	50.4
Oct. 27, 1939	8	51.0
Sept. 25, 1940	7	50.5
Oct. 28, 1942	8	50.5
Mar. 27, 1946	12	51.2

S51. (E-10.) Southbay Consolidated Water Co., Well 1, Kings Park.

Oct. 10, 1932	6.8	—

S55. (B-11.) Village of Saltaire, Fire Island.

Oct. 26, 1932	3.8	—

S60. (D-11.) Central Islip State Hospital, Central Islip.

Oct. 12, 1932	3.8	—
Mar. 20, 1946	5	54.8

S62. (D-10.) Brentwood Water District, No. 1, North side of large water tank and south of Long Island Railroad, Brentwood.

Mar. 6, 1946	8	—
Sept. 5, 1947	4.8	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S65. (E-11.) South Bay Consolidated Water Co., No. 1, Smithtown.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 15, 1946	8	51.0

S112 - S113 - S114. (F-13.) Oakwood Park Corp., Belle Terre.

May 16, 1950	9	—

S131. (G-26.) Perry Duryea, Montauk.

Aug. 26, 1946	36	56.0

S153. (D-18.) Rogers and Hallock, Westhampton Beach.

Oct. 11, 1932	34	—
Aug. 15, 1933	34	—
Nov. 15, 1933	34	—

S169. (G-20.) North Fork Water Co., South side Main Rd. east of South Harbor Rd., Southold.

Nov. 13, 1933	28	—
Sept. 13, 1949	24	—
July 11, 1950	36	—
July 7, 1952	36	—

S170. (G-20.) North Fork Water Co., South side of Main Rd., east of South Harbor Rd., Southold.

Sept. 13, 1949	40	—
July 11, 1950	36	57.7
July 7, 1952	36	—

S177. (H-21.) Village of Dering Harbor, Shelter Island.

Nov. 16, 1933	28	—

S178. (H-21.) Village of Greenport, Well Field No. 3, Greenport.

Oct. 11, 1932	45	—
Aug. 15, 1933	68	—
Nov. 15, 1933	63	—

S184. (F-22.) New York Water Service Corp., Sag Harbor.

Mar. 19, 1946	14	51.9

S189. (H-22.) Orient State Park.

1935	7600	—

S197. (H-21.) Shelter Island Heights Assoc., Well 2, Shelter Heights.

Date of collection	Chloride (ppm)	Temperature (°F)
Oct. 13, 1937	35	—
Nov. 9, 1937	80	—
Nov. 9, 1937	71	—
Dec. 6, 1937	50	—
Jan. 20, 1938	32	—
Feb. 25, 1938	26	—
April 1, 1938	24	—
May 9, 1938	24	—
June 7, 1938	22	—
Aug. 1, 1938	19	—
Sept. 6, 1938	53	—
Mar. 27, 1939	30	—

S198. (G-21.) Shelter Island Heights Assoc., Well 3, Shelter Island Heights.

Oct. 13, 1937	11	—
Nov. 10, 1937	12	—
Nov. 10, 1937	13	—
Dec. 6, 1937	12	—
Jan. 20, 1938	9	—
Feb. 25, 1938	13	—
April 1, 1938	12	—
May 9, 1938	10	—
June 7, 1938	12	—
Aug. 1, 1938	11	—
Sept. 6, 1938	14	—
Mar. 27, 1939	12	—

S199. (G-21.) Shelter Island Heights Assoc., Well 4, Shelter Island Heights.

Oct. 13, 1937	14	—
Nov. 10, 1937	12	—
Nov. 10, 1937	11	—
Dec. 6, 1937	15	—
Jan. 20, 1938	14	—
Feb. 25, 1938	17	—
April 1, 1938	16	—
May 9, 1938	16	—
June 7, 1938	14	—
Aug. 1, 1938	11	—
Sept. 6, 1938	19	—
Mar. 27, 1939	13	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S200. (H-21.) Shelter Island Heights Assoc., Well 1, Shelter Island Heights.

Date of collection	Chloride (ppm)	Temperature (°F)
Oct. 13, 1937	11	—
Dec. 6, 1937	21	—
Jan. 20, 1938	19	—
Feb. 25, 1938	20	—
April 1, 1938	20	—
May 9, 1938	20	—
June 7, 1938	20	—
Aug. 1, 1938	23	—
Sept. 6, 1938	20	—
Mar. 27, 1939	21	—

S301. (D-11.) Central Islip State Hospital, Central Islip.

Mar. 20, 1946	3	54.0

S527. (F-17.) H. C. Huckett, Sound Ave., Riverhead.

Aug. 22, 1945	20	—
July 11, 1946	16	—
Aug. 14, 1947	20	—
Aug. 30, 1948	20	—

S552. (F-17.) Congregational Church, Sound Ave., Baiting Hollow.

Aug. 16, 1945	19	—
July 11, 1946	20	—
July 30, 1948	20	—

S620. (F-18.) L. W. Corwin, Main Road, Aquebogue.

Aug. 16, 1945	15	—
July 18, 1946	16	—
Aug. 13, 1947	19	—
July 26, 1948	42	—

S638. (F-18.) E. Drop, Main Rd., Aquebogue.

Aug. 16, 1945	15	—
July 15, 1946	16	—
Aug. 13, 1947	16	—
Sept. 1, 1948	17	—

S644. (F-17.) J. B. Singer, 76 Sound Ave., Riverhead.

Aug. 23, 1945	15	—
Aug. 12, 1947	15	—
July 30, 1948	26	—

S681. (F-18.) Celic & Smith, Hubbard Ave., Aquebogue.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 21, 1945	11	—
July 16, 1946	24	—
Aug. 14, 1947	65	—

S715. (D-11.) Central Islip Hospital, Central Islip.

Feb. 8, 1928	3.4	—
Mar. 20, 1946	11	53.9

S716. (F-18.) J. W. Warner, Main Road, Aquebogue.

Aug. 22, 1945	37	—
July 16, 1946	40	—
Aug. 13, 1947	50	—
Aug. 4, 1948	54	—
July 12, 1949	14	—
July 19, 1949	15	—
Aug. 3, 1949	14	—
Aug. 16, 1949	16	—
Aug. 30, 1949	10	—
Sept. 15, 1949	16	—

S721. (F-24.) Amagansett Water Co., Amagansett.

Mar. 13, 1946	30	—

S738. (E-17.) J. Twomey, Calverton.

Aug. 5, 1945	32	—
July 18, 1946	8	—
Aug. 14, 1947	8	—
Aug. 11, 1948	18	—

S742. (F-16.) W. de Laguna, Cliff Road, Wildwood, Wading River.

Mar. 3, 1953	22	—

S848. (F-9.) U. S. Coast Guard, Eatons Neck Station, Eatons Neck.

Mar. 15, 1943	430	—

S871. (C-13.) No. 2, South Bay Consolidated Water Co.

S872. (C-13.) No. 1, East side of Lakeview Ave., north of Route 27, Bayport.

Mar. 13, 1946	12	51.2
Sept. 4, 1947	7.2	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S874. (E-9.) New York Water Service Corp., Centerport.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 15, 1946	14	51.2

S932. (F-16.) Anna Tremski, Middle Country Road, Calverton.

Aug. 13, 1945	23	—
Aug. 14, 1947	20	—
Aug. 4, 1948	26	—

S933. (D-14.) Suffolk Co. Home, Yaphank.

Nov. 1, 1949	8	—

S1029. (F-18.) J. Downs, Cedar Ave. and Main Road, Aquebogue.

Aug. 23, 1945	24	—
July 15, 1946	28	—
July 27, 1948	20	—

S1039. (F-9.) U. S. Coast Guard, Eaton's Neck.

Mar. 15, 1943	4.9	—

S1087. (E-19.) Hampton Bays Water Co., Well 3, Hampton Bays.

Aug. 4, 1950	15	—

S1097. (F-17.) K. Pugsley. Roanoke Ave., Riverhead.

Aug. 18, 1945	51	—
July 17, 1946	40	—
Aug. 13, 1947	35	—
July 27, 1948	32	—

S1099. (F-13.) Antone Miegocki, Mt. Sinai and Coram Roads, Mt. Sinai.

Aug. 25, 1945	4	—
Aug. 15, 1947	9	—

S1100. (F-17.) Mrs. L. L. Terry, North Rd. (61 Sound Ave.), Riverhead.

Aug. 17, 1945	32	—
July 11, 1946	20	—
Aug. 12, 1947	30	—
Aug. 26, 1948	26	—
Sept. 16, 1949	30	—

S1128. (F-16.) P. Burre, Oak Hills, Riverhead.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 18, 1945	18	—
July 11, 1946	16	—
Aug. 14, 1947	16	—
July 30, 1948	14	—

S1129. (F-16.) A. Magee, Oak Hills, Riverhead.

Aug. 17, 1945	14	—
July 11, 1946	18	—
Aug. 14, 1947	20	—
July 30, 1948	16	—

S1215. (F-17.) State of New York, Long Island Research Farm, Sound Ave., Riverhead.

Aug. 17, 1945	19	—
July 11, 1946	22	—
Aug. 12, 1947	19	—
July 27, 1948	22	—

S1232. (F-18.) Mrs. Stephanie Trubisz, Sound Ave., ¼ mile east of Pier Ave., Riverhead.

July 10, 1946	24	—
Aug. 12, 1947	20	—
Aug. 21, 1948	24	—

S1259. (F-16.) A. Anasky, Middle Country Road, Calverton.

July 17, 1946	18	—
Aug. 14, 1947	19	—
Aug. 11, 1948	24	—

S1277. (E-19.) T. J. Gerrity, off Old Country Road, East Quoque.

Aug. 23, 1945	2	—
July 17, 1946	10	—
Aug. 14, 1947	10	—
Sept. 1, 1948	15	—

S1303-S1306-S1311. (E-8.) New York Water Service Corp., No. 3, Huntington.

Mar. 15, 1946	16	51.0

S1306. (E-8.) New York Water Service Corp., No. 6, Huntington.

Mar. 15, 1946	16	51.0

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S1311. (E-8.) New York Water Service Corp., No. 11, Huntington.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 15, 1946	16	51.0

S1313. (E-8.) New York Water Service Corp., Huntington.

Mar. 14, 1946	10	52.4

S1318. (E-19.) Hampton Bays Water Co., Well 1, Hampton Bays.

Sept. 17, 1934	8	—
Aug. 4, 1950	22	—

S1319 to S1323. (F-17.) Riverhead Water Supply, north side West Main St. between Mill Rd. and Harrison Ave., Riverhead.

Oct. 11, 1932	5.5	(S1322)
Mar. 21, 1946	12	53.2
Sept. 4, 1947	5.6	(S1320-21)
Sept. 19, 1949	12	—
July 13, 1950	8	55.5
		54.3
July 9, 1952	8	(S1319-20)
July 1, 1953	6	(S1319-20)

S1326 to S1330. (C-8.) South Bay Consolidated Water Co., west of Long Island Railroad south side of tracks, Amityville.

Mar. 4, 1946	12	52.6
Sept. 5, 1947	7.8	—

S1331. (D-14.) South Bay Consolidated Water Co., Bellport.

Mar. 14, 1946	12	50.5

S1336. (F-13.) South Bay Consolidated Water Co., Port Jefferson.

Mar. 15, 1946	10	51.4

S1340. (E-21.) South Bay Consolidated Water Co., No. 1, Southampton.

Mar. 18, 1946	22	50.0

S1345. (D-18.) South Bay Consolidated Water Co., No. 1, Westhampton.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 18, 1946	12	50.0

S1347-S1349 & S4038-S4043. (D-18.) South Bay Consolidated Water Co., North side of Meetinghouse Road, West of Railroad Station on south side of Long Island Railroad, Westhampton Beach.

Sept. 4, 1947	5.8	—

S1350 & S1660 - S1664. (C-10.) New York Water Service Corp., No. 1, Babylon.

Mar. 14, 1946	6	50.2

S1373. (G-26.) Perry Duryea, Montauk.

Aug. 26, 1946	880	55.0

S1396. (G-26.) Perry Duryea, Montauk.

Aug. 26, 1946	6	64.0

S1424. (F-19.) J. McKay & Sons, Main Rd., Aquebogue.

July 15, 1946	20	—
Aug. 13, 1947	25	—
July 26, 1948	25	—
July 12, 1949	22	—
July 19, 1949	24	—
July 12, 1950	25	54.9
July 10, 1952	26	—
July 1, 1953	32	—

S1445. (D-9.) Herman Liere, Whitman Rd., So. Huntington.

Aug. 24, 1945	9	—
Aug. 18, 1947	11	—

S1481. (F-17.) Reeves Park Beach Co., Park Road, No. 2, Reeves Park.

Aug. 22, 1945	18	—
July 11, 1946	14	—
Aug. 12, 1947	18	—
July 27, 1948	21	—

S1610. (F-18.) L. Fanning, Sound Ave. and Union Ave., Riverhead.

July 10, 1946	30	—
July 28, 1948	38	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S1660-S1664. (C-10.) New York Water Service Corp., Babylon.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 14, 1946	6	50.2

S1667. (F-22.) Bridgehampton Water Co., Bridgehampton.

May 16, 1950	15	51.0

S1668. (H-21.) Village of Greenport, Moor's Lane near Main Rd., Station 1, #1, #3, #4, Greenport.

Mar. 22, 1946	94	51.5(#4)
Aug. 25, 1949	80	— (#4)
Nov. 29, 1949	84	—
July 8, 1950	76	— (#4)
Feb. 28, 1951	79	—
Mar. 28, 1951	84	—

S1669. (H-21.) Village of Greenport, Moore's Lane, near Main Rd., Station 1, #5, Greenport.

Aug. 25, 1949	135	—
July 7, 1950	153	63.6

S1673-S1678. (H-21.) Village of Greenport, southeast cor. North Rd. and Moore's Lane, Station 3, Greenport.

Dec. 1945	255	—
Aug. 24, 1949	424	—
July 7, 1950	123	53.7
Feb. 28, 1951	180	—
Mar. 28, 1951	160	—
July 9, 1952	340	—

S1679. (E-19.) Hampton Bays Water District, Well No. 2, Hampton Bays.

Sept. 22, 1941	240	—
Mar. 12, 1946	42	52.2
Aug. 4, 1950	14	—

S1691 to S1700, S4003 to S4022. (C-10.) South Bay Consolidated Water Co., south of intersection of 5th Ave. and Clinton Ave., composite of 28 wells, Bayshore.

Mar. 13, 1946	8	52.0
Sept. 4, 1947	7.2	—

S1721. (D-10.) Pilgrim State Hospital, Brentwood.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 20, 1946	6	50.0

S1776. (F-17.) A. H. Warner, Sound Ave., Riverhead.

Aug. 17, 1945	32	—
July 11, 1946	14	—
Aug. 12, 1947	16	—
July 28, 1948	10	—

S1777. (F-17.) H. E. Aldrich, Doctor's Path, Riverhead.

Aug. 17, 1945	8	—
July 16, 1946	10	—
Aug. 13, 1947	10	—
July 28, 1948	12	—

S1790. (F-18.) R. J. Goodale, Main Road, Aquebogue.

Aug. 16, 1945	30	—
July 15, 1946	26	—
Aug. 16, 1946	30	—
Aug. 13, 1947	20	—
July 26, 1948	20	—

S1791. (F-18.) R. J. Doodale, Main Road, Aquebogue.

Aug. 16, 1945	36	—
July 15, 1946	20	—
Aug. 16, 1946	36	—
Aug. 13, 1947	28	—

S1818. (G-19.) N. Chudiak, North Road and Bergen Ave., Mattituck.

Aug. 21, 1945	25	—
July 17, 1946	24	—
Aug. 13, 1947	30	—
Aug. 16, 1948	30	—
Sept. 13, 1949	28	—
July 12, 1950	25	54.7
July 7, 1952	42	—

S1822. (F-16.) A. R. Thurm & Son, 6600 feet Fresh Pond Ave., north of Main Road, Calverton.

Aug. 16, 1945	10	—
July 17, 1946	12	—
Aug. 14, 1947	10	—
Aug. 9, 1948	16	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S1838. (F-17.) H. R. Talmage & Son, Sound Ave., Baiting Hollow.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 16, 1945	14	—
July 11, 1946	20	—
Aug. 12, 1947	20	—
Aug. 30, 1948	22	—
July 12, 1949	20	—
July 19, 1949	19	—
Aug. 3, 1949	20	—
Aug. 16, 1949	24	—
Aug. 30, 1949	18	—
Sept. 20, 1949	18	—

S1842. (E-9.) Louis DeLeci, Elwood Road, Elwood.

Aug. 15, 1947	15	—

S1892. (F-17.) H. Meyjes, Riley Ave., Calverton.

Aug. 15, 1945	26	—
July 17, 1946	26	—
Aug. 14, 1947	28	—
Aug. 12, 1948	28	—
Sept. 19, 1949	26	—
July 13, 1950	24	51.4

S1912. (F-16.) W. Weckesser, Oak Hills, Riverhead.

Aug. 18, 1945	17	—
July 11, 1946	15	—
Aug. 14, 1947	18	—
Aug. 31, 1948	23	—
July 12, 1949	18	—
July 19, 1949	22	—
Aug. 3, 1949	22	—
Aug. 16, 1949	24	—
Aug. 30, 1949	24	—
Sept. 20, 1949	20	—
July 13, 1950	16	—

S1926. (F-17.) Sound Dredging Co., Sound Ave., Riverhead.

July 11, 1945	4	—
Aug. 22, 1945	24	—

S1929. (F-17.) J. C. Neinstedt, Sound Ave., Baiting Hollow.

Date of collection	Chloride (ppm)	Temperature (°F)
July 11, 1946	18	—
Aug. 12, 1947	18	—
July 28, 1948	18	—
Sept. 19, 1949	20	—
July 13, 1950	16	51.6

S1930. (F-17.) John C. Neinstedt, Sound Ave., Baiting Hollow.

July 11, 1946	18	—
Aug. 14, 1947	20	—
July 28, 1948	26	—

S1931. (F-17.) John C. Neinstedt, Sound Ave., Baiting Hollow.

July 11, 1946	20	—
Aug. 14, 1947	20	—
July 28, 1948	26	—

S1951. (E-9.) Curt Pichrodt, Pulaski Blvd., Greenlawn.

Aug. 25, 1945	6	—
Aug. 18, 1947	8	—

S2010. (F-17.) E. C. Griffin & Son, Park Road, Reeves Park.

Aug. 23, 1945	10	—
July 11, 1946	22	—
July 27, 1948	22	—
Sept. 19, 1949	20	—
July 13, 1950	18	—

S2017. (F-17.) Reeves Park Beach Co., Inc., Park Road, No. 1, Reeves Park.

Aug. 22, 1945	13	—
July 11, 1946	16	—
Aug. 13, 1947	20	—
July 27, 1948	17	—

S2018. (F-17.) Reeves Park Beach Co., Inc., Park Road, No. 3, Reeves Park.

Aug. 23, 1945	49	—
July 11, 1946	38	—
Aug. 12, 1947	26	—
July 27, 1948	28	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S2099. (F-17.) A. A. Barber, Atlantic Plumbing & Heating Co., 940 West Main St., Riverhead.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 4, 1945	14	—
July 16, 1946	26	—
Aug. 15, 1947	20	—
July 30, 1948	38	—
Sept. 19, 1949	40	—
July 13, 1950	20	—

S2150. (G-27.) Montauk Water Supply Corp., Well 7, Montauk.

Mar. 13, 1946	18	—

S2229. (G-26.) Montauk Water Service Corp., Well 9, Montauk.

July 27, 1946	35	—

S2331. (F-18.) H. F. Corwin, Main Road, Aquebogue.

Aug. 16, 1945	17	—
July 15, 1946	14	—
Aug. 13, 1947	20	—
July 26, 1948	24	—

S2365. (E-18.) E. G. Swanson, Maple St., Riverhead Estates.

Sept. 4, 1945	8	—
July 17, 1946	16	—
Aug. 12, 1948	14	—

S2370. (F-18.) N. Barowitz, Main Road, Aquebogue.

Aug. 23, 1945	15	—
July 16, 1946	16	—
Aug. 13, 1947	18	—
July 30, 1948	22	—

S2374. (E-18.) C. W. Cuhns, Flanders Rd., Flanders.

Aug. 21, 1945	12	—
July 17, 1946	12	—

S2402. (F-23.) Home Water Corp., No. 2, East Hampton.

Mar. 3, 1946	16	51.0

S2467 - S2468. (D-14.) Suffolk County Home & Infirmary, Yaphank.

Nov. 1, 1949	8	—

S2475-S2467-S2468. (D-14.) Suffolk County Home, Yaphank.

Date of collection	Chloride (ppm)	Temperature (°F)
Nov. 1, 1949	8	—

S2476. (E-15.) Brookhaven National Laboratory, Well No. 1, Brookhaven.

May 10, 1948	12	—
Dec. 21, 1948	5.1	—
Jan. 9, 1953	7	—

S2485. (E-15.) Former Long Island Railroad Supply Well, Brookhaven.

May 27, 1948	4.8	—
Dec. 5, 1950	6	—
Mar. 7, 1952	4	—

S2534. (F-17.) Reeves Park, Park Rd., No. 4, Reeves Park.

Aug. 22, 1945	21	—
July 11, 1946	18	—
Aug. 12, 1947	30	—
July 27, 1948	19	—

S2570. (F-23.) Home Water Corp., No. 7, East Hampton.

Mar. 3, 1946	16	51.0

S2586. (F-16.) A. G. Meyers, Driftwood Manor, Sound Ave., Baiting Hollow.

Aug. 16, 1945	11	—
July 11, 1946	12	—
Aug. 12, 1947	12	—
Aug. 30, 1948	16	—

S2587. (F-16.) A. G. Meyers, Sound Ave., Baiting Hollow.

Aug. 16, 1945	13	—
July 11, 1946	18	—
Aug. 12, 1947	20	—
Aug. 30, 1948	16	—

S2588. (F-16.) A. G. Meyers, Sound Ave., Oak Hills.

July 11, 1946	14	—
Aug. 12, 1947	15	—
Aug. 30, 1948	18	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S2645. (F-16.) Suffolk County Boy Scouts, Sound Ave., Oak Hills.

Date of collection	Chloride (ppm)	Temperature (°F)
July 11, 1946	12	—
Aug. 12, 1947	10	—

S2654. (F-17.) I. M. Young, Roanoke Ave., Riverhead.

Aug. 18, 1945	19	—
July 11, 1946	22	—
Aug. 13, 1947	30	—
Aug. 29, 1948	24	—

S2676. (F-19.) William A. Lindsay, Mattituck.

Sept. 7, 1948	22	—
Sept. 14, 1949	12	—
July 12, 1950	16	51.1
July 7, 1952	42	—

S2778. (F-18.) L. H. Corwin, Main Road, Aquebogue.

Aug. 17, 1945	15	—
July 15, 1946	16	—
Aug. 12, 1947	20	—

S2815. (D-16.) Vitobello, Chichester Ave., Center Moriches.

Mar. 3, 1950	12	—
Aug. 8, 1951	8	—
Nov. 21, 1952	6	—

S2838. (F-18.) H. H. Wells, Main Rd., Aquebogue.

Aug. 16, 1945	33	—
July 16, 1946	24	—
Aug. 13, 1947	24	—
Aug. 16, 1948	20	—

S2840. (F-16.) W. S. Miller, Oak Hills.

Aug. 17, 1945	14	—
Aug. 14, 1947	15	—
Aug. 31, 1948	15	—

S2978-S3012. (E-9.) Northport Water Works Co., south side of Washington St., Route 25A, west of Woodbine Ave., Northport. (No. 1 - No. 2.)

Mar. 27, 1946	6	51.0
Sept. 3, 1947	5.2	—

S2984. (C-10.) U. S. G. S., Bayshore.

Date of collection	Chloride (ppm)	Temperature (°F)
July 19, 1941	7	50.6
July 26, 1941	8	53.3
Aug. 2, 1941	—	51.1
Aug. 9, 1941	—	51.5
Aug. 16, 1941	6	48.1
Aug. 23, 1941	—	52.1
Aug. 30, 1941	—	52.6
Sept. 6, 1941	—	52.8
Sept. 13, 1941	7	52.7
Oct. 4, 1941	—	53.5
Oct. 11, 1941	—	53.0
Oct. 18, 1941	6	53.1
Oct. 25, 1941	—	53.0
Nov. 1, 1941	—	53.0
Nov. 8, 1941	—	52.9
Nov. 15, 1941	6	52.5
Nov. 22, 1941	—	52.2
Nov. 29, 1941	—	52.0
Dec. 6, 1941	—	51.7
Dec. 13, 1941	4	51.3
Dec. 20, 1941	—	50.8
Dec. 27, 1941	—	50.5
Jan. 3, 1942	—	50.1
Jan. 10, 1942	—	49.4
Jan. 17, 1942	9	49.2
Jan. 24, 1942	—	49.2
Jan. 31, 1942	—	48.5
Feb. 7, 1942	8	—
Mar. 7, 1942	7	—

S3002. (F-16.) L. Kobylenski, Middle Country Road, Calverton.

Aug. 16, 1945	10	—
July 17, 1946	18	—
Aug. 14, 1947	19	—
Aug. 10, 1948	18	—

S3003. (F-17.) Reeves Park, Sound Ave., No. 5, Reeves Park.

Aug. 22, 1945	17	—

S3012. (E-9.) Northport Water Works Co., south side of Washington St., Route 25A, west of Woodbine Ave., Northport.

Mar. 27, 1946	6	51.0
Sept. 3, 1947	5.2	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S3045. (G-20.) North Fork Water Co., south side Main Rd., east of South Harbor Rd., Southold.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 22, 1946	30	53.0
Sept. 13, 1949	40	— (3)
July 11, 1950	31	52.9
July 7, 1952	32	—

S3046. (F-18.) Antone Zambruski, Church Lane, Aquebogue.

Aug. 16, 1945	28	—
July 16, 1946	14	—
Aug. 13, 1947	20	—
Aug. 13, 1948	28	—

S3062. (G-26.) Montauk Water Supply Corp., Montauk.

July 27, 1946	24	—

S3069. (E-18.) R. S. McDonald, Flanders Rd. and Flanders Blvd., Riverhead Estates.

Aug. 21, 1945	16	—
July 17, 1946	14	—
Aug. 14, 1947	10	—
Sept. 22, 1949	20	—
Sept. 22, 1949	12	—

S3090. (F-18.) B. Zaloga, Main Rd., Aquebogue.

Aug. 18, 1945	17	—
July 18, 1946	20	—
Aug. 13, 1947	21	—
July 30, 1948	24	—

S3197. (E-15.) Brookhaven National Laboratory, Well No. 2, Brookhaven.

April 16, 1948	4.8	—
Dec. 15, 1950	7	—
Jan. 9, 1953	4	—

S3277. (F-18.) F. F. & C. T. Reeve, Main Road, Aquebogue.

Aug. 18, 1945	23	—
July 15, 1946	34	—
Aug. 13, 1947	25	—
July 30, 1948	28	—

S3278. (F-18.) C. Stepanitus, Church Lane, Aquebogue.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 23, 1945	17	—
July 16, 1946	14	—
Aug. 13, 1947	15	—
July 30, 1948	14	—

S3405. (E-15.) Brookhaven National Laboratory, Sewage plant supply well, Brookhaven.

May 13, 1948	5.6	—
July 16, 1951	6	—
Jan. 15, 1953	5	—

S3418. (E-18.) U. S. Army, Moriches Rd., Riverhead.

Aug. 21, 1945	10	—
July 17, 1946	8	—

S3487. (F-18.) U. S. Army, Sound Shore Road, Northville.

Aug. 2, 1945	23	—

S3554. (F-9.) U. S. Coast Guard, Eaton's Neck Station.

Mar. 12, 1943	35	—

S3570. (F-17.) J. Balnis, Reeves Ave., Riverhead.

Aug. 21, 1945	18	—
July 16, 1946	18	—
Aug. 14, 1947	30	—
July 27, 1948	27	—

S3588-S3589. (G-20.) J. M. Lupton & Son, Wickham Farm, Cutchogue.

Sept. 14, 1948	26	—

S3615. (G-26.) Montauk Water Supply Corp., Flamingo Drive at Reservoir, Montauk Point.

Mar. 13, 1946	30	50.4

S3627. (F-18.) L. Fanning, Sound & Union Aves., Northville.

Aug. 23, 1945	112	—
July 10, 1946	28	—
Aug. 12, 1947	28	—
Aug. 29, 1948	40	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S3634. (F-18.) L. Fanning, Sound & Union Aves., Northville.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 23, 1945	30	—
July 10, 1946	32	—
Aug. 12, 1947	32	—
Aug. 30, 1948	40	—

S3639. (E-10.) U. S. Veterans Administration Facility, Northport.

Mar. 27, 1946	12	50.4

S3658. (G-26.) Montauk Water Service Corp., Montauk Point.

Mar. 13, 1946	28	—

S3697. (H-21.) Village of Greenport, north side North Rd. west of Rocky Point Rd., Station 4, East Marion.

Aug. 25, 1949	22	—
July 7, 1950	30	52.4
Feb. 28, 1951	28	—
Mar. 28, 1951	29	—
July 9, 1952	30	—

S3698. (H-21.) Village of Greenport, north side North Rd., west of Rocky Point Rd., Station 4, East Marion.

Aug. 25, 1949	28	—
July 7, 1950	27	52.0

S3705. (F-18.) George F. Naugles, Sound Ave. and Herrick Lane, Jamesport.

Aug. 16, 1948	25	—

S3716. (F-17.) A. L. Young, 72 Sound Ave., Riverhead.

July 10, 1946	12	—
Aug. 12, 1947	20	—
Aug. 4, 1948	20	—

S3720. (F-17.) M. Balnis, Reeves Ave., Riverhead.

Aug. 21, 1945	40	—
July 11, 1946	34	—
Aug. 14, 1947	50	—
July 29, 1948	66	—

S3721. (F-17.) W. Kobylenski, Middle Rd., Calverton.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 23, 1945	24	—
July 16, 1946	18	—
Aug. 13, 1947	20	—
Aug. 10, 1948	30	—
July 12, 1949	21	—
July 19, 1949	20	—
Aug. 3, 1949	22	—
Aug. 16, 1949	24	—
Aug. 30, 1949	22	—

S3722. (F-17.) F. Yousik, Middle Rd., Riverhead.

Aug. 21, 1945	18	—
July 16, 1946	18	—
Aug. 13, 1947	20	—
Aug. 3, 1948	20	—

S3723. (G-20.) Isadore Krupski, Main Rd., Peconic.

Sept. 13, 1948	35	—

S3725. (G-26.) Montauk Water Service Corp., Montauk.

Mar. 13, 1946	28	—

S3726. (G-26.) Montauk Water Service Corp., Montauk.

Mar. 13, 1946	28	—

S3764. (F-18.) R. McKay, Main Rd., (Union Ave.), Northville.

July 18, 1946	28	—
Aug. 13, 1947	40	—
July 26, 1948	28	—

S3765. (F-17.) C. McBurnie, Middle Road, Riverhead.

Aug. 21, 1945	18	—
Aug. 18, 1947	19	—
Aug. 4, 1948	28	—

S3766. (F-18.) Walter Smith, Peconic Bay Blvd., Riverhead.

Aug. 21, 1945	11	—
July 16, 1946	24	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S3767. (F-17.) E. Koroleski, Reeves Ave., Riverhead.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 21, 1945	17	—
July 16, 1946	20	—
Aug. 14, 1947	20	—
July 28, 1948	22	—

S3768. (F-18.) A. Ogeka, Riverside Drive, Riverhead.

Aug. 14, 1947	30	—

S3779. (F-19.) Stanley Zaweski, Peconic Bay Blvd., Jamesport.

Aug. 16, 1948	24	—

S3789. (F-17.) C. C. Young, 57 Sound Ave., Riverhead.

July 11, 1946	30	—
Aug. 12, 1947	22	—

S3800. (E-10.) South Bay Consolidated Water Co., Kings Park.

Mar. 15, 1946	10	50.1

S3813 to S3815. (C-12.) South Bay Consolidated Water Co., north side of Montauk Highway, Route 27, west of Locust Ave., Oakdale.

Mar. 14, 1946	8	50.2
Sept. 4, 1947	5.6	—

S3824. (F-18.) L. T. Wells, Sound Ave., Riverhead.

Aug. 17, 1945	28	—
July 10, 1946	26	—
Aug. 12, 1947	30	—
July 29, 1948	28	—
Sept. 16, 1949	28	—

S3831. (D-11.) Central Islip State Hospital, No. 1, Central Islip.

Mar. 20, 1946	6	55.0

S3832. (D-11.) Central Islip State Hospital, No. 2, Central Islip.

Mar. 20, 1946	5	54.0

S3835. (D-11.) Central Islip State Hospital, No. 5, Central Islip.

Mar. 20, 1946	6	54.1

S3845. (F-17.) Dan Donahue, Middle Country Road, Calverton.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 15, 1945	18	—
July 17, 1946	20	—
Aug. 14, 1947	25	—
Aug. 11, 1948	29	—

S3876. (F-18.) J. Celic, Hubbard Avenue, Riverhead.

Aug. 21, 1945	20	—
July 16, 1946	26	—
Aug. 14, 1947	24	—

S3878. (F-17.) J. Danielowich, West Middle Road, Calverton.

July 16, 1946	20	—
Aug. 14, 1947	20	—
Aug. 16, 1948	20	—

S3941. (E-16) A. Rychlincski, River Road, Calverton.

Aug. 15, 1945	25	—
July 17, 1946	18	—
Aug. 14, 1947	22	—
Aug. 11, 1948	19	—

S3958. (F-17.) J. Karlin, Riley Ave., Calverton.

Aug. 18, 1945	18	—
July 17, 1946	18	—
Aug. 14, 1947	20	—
July 30, 1948	20	—

S3966. (F-19.) Chester R. Koloski, Route 25, Laurel.

Sept. 3, 1948	23	—
July 12, 1949	17	—
July 18, 1949	20	—
Aug. 2, 1949	20	—
Aug. 15, 1949	20	—
Aug. 30, 1949	22	—
Sept. 20, 1949	18	—
July 12, 1950	18	52.7
July 7, 1952	20	—

S3980-S4002. (D-13.) South Bay Consolidated Water Co., Patchogue.

Mar. 13, 1946	18	53.5

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S4003 to S4022. (C-10.) South Bay Consolidated Water Co., south of intersection of 5th Ave. and Clinton Ave., Bayshore.

Date of collection	Chloride (ppm)	Temperature (°F)
Mar. 13, 1946	8	52.0
Sept. 4, 1947	7.2	—

S4025. (F-18.) G. Naugles, 145 Sound Ave., Riverhead.

Aug. 18, 1945	25	—
July 12, 1946	20	—
Aug. 15, 1947	30	—
July 29, 1948	28	—

S4027. (G-19.) Stanley Simchick, Alvah Lane, Cutchogue.

Sept. 4, 1945	38	—
July 17, 1946	28	—
Aug. 15, 1947	30	—
Aug. 16, 1948	28	—

S4028. (C-10.) New York Water Service Corp., No. 1, Babylon.

Mar. 13, 1946	12	51.0

S4031-S4831. (C-10.) New York Water Service Corp., South group of wells at Smith St. pumping station, Babylon, (No. 4), (No. 6).

Sept. 29, 1947	6.2	—

S4038-S4043. (D-18.) South Bay Consolidated Water Co., north side of Meetinghouse Rd., west of Railroad station and on south side of Long Island Railroad, Westhampton Beach.

Sept. 4, 1947	5.8	—

S4048. (F-17.) O. De Friest, Sound Ave., Baiting Hollow.

July 11, 1946	16	—
July 27, 1948	26	—

S4066. (F-17.) V. Zilnicke, Roanoke Ave., Riverhead.

July 16, 1946	26	—
Aug. 13, 1947	25	—
Aug. 3, 1948	30	—

S4067. (F-17.) S. Kozok, Reeves Ave., Riverhead.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 21, 1945	23	—
July 16, 1946	24	—
Aug. 14, 1947	20	—
July 27, 1948	26	—

S4068. (F-17.) J. Kaelin, Roanoke Ave., Riverhead.

Aug. 18, 1945	40	—
July 16, 1946	30	—
Aug. 13, 1947	30	—
Aug. 3, 1948	30	—

S4077. (F-17.) Mrs. A. Yakaboski, Main Road, Cutchogue.

Aug. 15, 1945	20	—
July 17, 1946	22	—
Aug. 11, 1948	22	—

S4078. (F-18.) S. Blasco, Youngs Ave., Calverton.

Aug. 15, 1945	23	—
July 17, 1946	6	—
Aug. 11, 1948	24	—

S4079. (F-18.) P. Zaweski, Pier Ave., Riverhead.

Aug. 18, 1945	25	—
Aug. 15, 1947	25	—
July 30, 1948	26	—

S4080. (F-16.) L. Adamezeski, River Rd., Calverton.

July 17, 1946	22	—
Aug. 14, 1947	20	—
Aug. 11, 1948	12	—

S4081. (F-19.) J. Celic, Bergen Ave., Mattituck.

Aug. 22, 1945	27	—
July 17, 1946	28	—
Aug. 13, 1947	30	—
Aug. 16, 1948	36	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S4082. (F-18.) F. Doroski, West Lane, Aquebogue.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 16, 1945	24	—
July 16, 1946	22	—
Aug. 13, 1947	25	—
Aug. 16, 1948	26	—
Sept. 1, 1949	28	—

S4083. (F-16.) M. Czygier, Middle Country Road, Calverton.

Aug. 15, 1945	9	—
July 17, 1946	18	—
Aug. 14, 1947	20	—
Aug. 12, 1948	18	—

S4084. (F-18.) J. Gatz, 128 Sound Ave., Riverhead.

Aug. 17, 1945	34	—
July 11, 1946	10	—
Aug. 15, 1947	30	—

S4086. (F-17.) W. Koroleski, Reeves Ave., Riverhead.

July 16, 1946	18	—
Aug. 14, 1947	18	—
July 28, 1948	26	—

S4087. (F-17.) E. Sujeski, Twomey Ave., Calverton.

Aug. 15, 1945	21	—
July 17, 1946	16	—
Aug. 14, 1947	18	—
Aug. 10, 1948	28	—

S4088. (F-17.) P. M. Hogan, Twomey Ave., Calverton.

Aug. 15, 1945	20	—
July 17, 1946	24	—
Aug. 14, 1947	28	—
Aug. 10, 1948	30	—

S4089. (F-17.) C. McKay, Middle Rd., Calverton.

Aug. 21, 1945	19	—
July 17, 1946	24	—
Aug. 13, 1947	25	—
Aug. 9, 1948	22	—

S4090. (F-17.) A. Yousik, Reeves Avenue, Riverhead.

Date of collection	Chloride (ppm)	Temperature (°F)
Aug. 21, 1945	30	—
July 16, 1946	22	—
Aug. 14, 1947	11	—
July 28, 1948	22	—

S4091. (G-20.) Baron Hill, Youngs Avenue, Southold.

Sept. 5, 1945	24	—
July 12, 1946	30	—
Aug. 13, 1947	30	—
Sept. 13, 1948	37	—
Sept. 13, 1949	40	—
July 11, 1950	83	53.0
July 9, 1952	918	—

S4091R. (G-20.) Baron Hill, Youngs Ave., Southold. (Replacement well for and 500′ west of S4091 same depth and diameter.)

July 25, 1953	34	—

S4097. (F-17.) K. F. Terry, Sound Ave., Riverhead.

Aug. 21, 1945	18	—
July 11, 1946	18	—
Aug. 12, 1947	18	—
Aug. 4, 1948	23	—

S4105-S4106. (E-12.) Cedar Grove Park, Ronkonkoma.

Mar. 7, 1946	20	45.0

S4112. (D-8.) New York State Institute of Applied Agriculture, Farmingdale.

Mar. 28, 1946	6	51.0

S4116. (F-18.) E. Young, 91 Sound Ave., Riverhead.

Aug. 17, 1945	26	—
July 10, 1946	24	—
Aug. 12, 1947	26	—
Sept. 1, 1948	30	—

S4122. (F-18.) R. J. Goodale & Sons, Main Road, Aquebogue.

Aug. 16, 1945	16	—
July 15, 1946	24	—
July 26, 1948	30	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S4123. (F-18.) J. Anderson, Main Road, Jamesport.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 4, 1945	26	—
July 18, 1946	22	—
Aug. 13, 1947	26	—
Sept. 2, 1948	30	—
July 10, 1952	22	—
July 1, 1953	30	—

S4124. (F-17.) W. Kobylenski, Middle Rd., Calverton.

Aug. 15, 1945	13	—
July 16, 1946	16	—
Aug. 14, 1947	18	—
Aug. 10, 1948	20	—

S4125. (F-17.) M. Berezny, Mill Rd., Riverhead.

Aug. 23, 1945	9	—
July 16, 1946	10	—
Aug. 14, 1947	10	—
Aug. 5, 1948	12	—

S4134. (F-17.) Riverhead Water District, Riverhead.

Aug. 15, 1947	8	—

S4135. (H-21.) A. J. Dzenkowski, East Marion.

Sept. 14, 1948	26	—
Summer 1949	28	—
July 18, 1949	24	—
Aug. 2, 1949	28	—
Aug. 15, 1949	34	—
Aug. 30, 1949	36	—
Sept. 15, 1949	26	—
Sept. 20, 1949	30	—
July 7, 1950	24	52.4
July 7, 1952	28	—

S4143. (F-19.) S. Zaweski, Main Rd., Jamesport.

July 18, 1946	22	—
Aug. 13, 1947	22	—
Sept. 9, 1948	26	—

S4145. (E-11.) H. Lorentsen, north side of Larsen Ave., Halloak Acres about three-fourths mile south of intersection of Middle Country Rd., Route 25, and Smithtown Rd., Smithtown Branch.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 10, 1947	3.6	—

S4163. (G-20.) North Fork Water Co., south side Main Rd., east of South Harbor Rd., Southold.

Sept. 13, 1949	40	—
July 11, 1950	36	53.5
July 9, 1952	134	—

S4194. (F-17.) Halsey Reeve, Middle Road, Riverhead.

Aug. 5, 1948	26	—
Sept. 16, 1949	30	—
July 13, 1950	25	51.4

S4195. (D-15.) William H. Glover, Yaphank Ave., Yaphank.

Aug. 15, 1947	12	—
July 28, 1948	12	—

S4231. (F-19.) J. Ebb Weir, Inc., Sound Road and Manor Lane, Jamesport.

Sept. 2, 1948	17	—

S4237. (E-16.) Maxim Babinsky, Main Rd., Manorville.

Sept. 2, 1948	10	—

S4239. (G-20.) Steve Koroleski, Main Rd., Peconic.

Sept. 5, 1945	30	—
July 1, 1946	30	—
Aug. 13, 1947	30	—
Aug. 6, 1948	30	—
Sept. 14, 1949	26	—
July 11, 1950	25	52.5
July 9, 1952	36	—
July 1, 1953	26	—

S4240. (F-18.) Mitchell Zeimacki, Manor Lane, Jamesport.

Sept. 8, 1945	30	—
July 16, 1946	28	—
Aug. 13, 1947	28	—
Sept. 1, 1948	30	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S4352. (F-19.) Edward Buchak, Buchak Farm, between Middle Country Road and North Ave., Laurel.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 3, 1948	28	—

S4372. (F-13.) South Bay Consolidated Water Co., north side of Route 25A, Port Jefferson.

Sept. 10, 1947	5.0	—

S4413. (G-19.) Paul Klaski, Alvah Lane, Cutchogue.

Sept. 4, 1945	30	—
July 17, 1946	20	—
Aug. 13, 1947	20	—
Aug. 6, 1948	21	—
Aug. 24, 1949	28	—

S4415. (F-16.) Mike Czygier, Main Road, Calverton.

Aug. 11, 1948	21	—

S4416. (F-16) Walter Waskeicz, Route 25 and Hulse Landing Rd., Wading River.

Aug. 15, 1947	10	—
Aug. 30, 1948	12	—

S4417. (F-17.) W. R. Linner, Osbourne Ave., Riverhead.

Aug. 5, 1948	18	—

S4421. (F-16.) Irving Hulse, ½ mile west Fresh Pond Rd., ½ mile east Hulse Ave., Baiting Hollow.

Aug. 30, 1948	18	—

S4422. (F-16.) Fred Lewin, Sound Ave., Baiting Hollow.

Aug. 30, 1948	25	—

S4473. (F-18.) Peter J. Kujawski, Sound Ave., Jamesport.

Sept. 2, 1948	30	—

S4474. (G-20.) John Pietrewicz, Main Rd., Cutchogue.

Sept. 9, 1948	30	—
July 7, 1949	28	—
July 18, 1949	27	—
Aug. 2, 1949	24	—
Aug. 15, 1949	24	—
July 11, 1950	29	52.9

S4484. (G-21.) M. J. Shipuleski, Southold.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 14, 1948	35	—
July 7, 1949	30	—
Sept. 14, 1949	24	—
July 11, 1950	29	51.2
July 7, 1952	30	—

S4501. (F-14.) Culross Corp., Rocky Point.

May 16, 1950	60	—

S4511. (F-18.) Vernon F. Wells, Sound Ave., Riverhead.

July 29, 1948	21	—

S4512. (F-18.) Charles Cichanowicz, Sound Ave. and Herrick Lane, Jamesport.

Sept. 7, 1948	30	—

S4513. (F-18.) John Cichanowicz, Northville Tpke. and Doctor's path, Riverhead.

Aug. 5, 1948	20	—

S4514. (F-17.) L. Y. Robinson, Sound Ave., Riverhead.

Aug. 31, 1948	17	—

S4537. (E-18.) Mike Stokojlo, Lewis Road, East Quogue.

Aug. 15, 1947	15	—
Sept. 1, 1948	12	—

S4543. (F-17.) Joseph Karpinski, north of Sound Ave., west of Osbourne Ave., Baiting Hollow.

Aug. 31, 1948	25	—

S4544. (F-16.) Anton Wanat, north of Sound Ave., Baiting Hollow.

Aug. 30, 1948	34	—

S4547. (F-19.) John Shuot, Herrick Lane, Jamesport.

Sept. 12, 1948	28	—

S4551. (F-17.) Halsey Reeve, Roanoke Ave., Riverhead.

Aug. 5, 1948	12	—
Sept. 16, 1949	28	—
July 13, 1950	8	52.5

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S4565. (G-20.) Mike Muznic, Cutchogue.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 10, 1948	25	—
July 14, 1950	19	—

S4566. (F-19.) Joseph Sieminski, Jamesport.

Sept. 2, 1948	25	—
July 12, 1949	26	—
July 18, 1949	27	—
Aug. 2, 1949	30	—
July 12, 1950	25	52.6
July 10, 1952	24	—

S4576. (F-19.) William Chudiak, Bergen Ave., Mattituck.

Sept. 8, 1948	32	—
Aug. 29, 1949	32	—

S4580. (G-20.) Mrs. M. Doroski, Main Rd., Cutchogue.

Sept. 10, 1948	45	—

S4585. (F-19.) Joseph Cain, Laurel.

Sept. 3, 1948	24	—

S4617. (F-18.) Max Sawicki, West Lane, Aquebogue.

Aug. 13, 1948	28	—

S4618. (G-20.) Leander Glover, Main Rd. at Cox Lane, Cutchogue.

Sept. 10, 1948	36	—

S4620. (F-18.) Stanley Cichanowiez, Sound Ave., Riverhead.

Aug. 5, 1948	24	—

S4621. (D-14.) Suffolk County Home, Yaphank.

Nov. 1, 1949	6	—

S4666. (E-15.) Fred Hutton, South St. and Dayton Ave., South Manorville.

Aug. 15, 1947	25	—
July 28, 1948	24	—

S4676. (F-18.) J. T. Luce, Sound Ave. and Church Lane, Jamesport.

Sept. 2, 1948	24	—

S4725. (G-19.) Alex Domaleski, North Rd., Mattituck.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 8, 1948	22	—
July 18, 1949	24	—
Aug. 2, 1949	26	—
July 14, 1950	23	—
July 17, 1952	24	—
July 1, 1953	25	—

S4761. (B-12.) Seaview Utilities, Inc., Fire Island.

May 16, 1950	9.6	—

S4795. (F-18.) M. Zeimacki, Jamesport.

Aug. 30, 1948	25	—

S4825. (E-16.) John F. Danielowich, Chichester Ave., Manorville.

Oct. 4, 1948	18	—

S4831. (C-10.) New York Water Service Corp., south group of wells at Smith St. pumping station, Babylon.

Sept. 29, 1947	6.2	—

S4944. (F-16.) Joseph Ruskowski, north of Fresh Pond Rd., Calverton.

Aug. 12, 1948	19	—

S5012. (F-18.) Walter Smith, Peconic Bay Blvd., Riverhead.

Aug. 14, 1947	65	—
Aug. 19, 1948	16	—
Sept. 19, 1949	12	—

S5068. (E-9.) Greenlawn Water District, east side of Stony Hollow Rd. about .4 mile south of Route 25A, Greenlawn.

Sept. 3, 1947	5.8	—

S5115. (F-17.) John Twomey, east of Twomey Ave., Calverton.

Aug. 10, 1948	21	—

S5189. (G-20.) Leander Glover, Cox Lane and Middle Road, Cutchogue.

Sept. 8, 1948	32	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Concluded).

S5208. (G-20.) John Bauer, Peconic.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 10, 1948	20	—

S5234. (E-15.) Brookhaven National Laboratory, Well No. 4, Brookhaven.

May 27, 1948	4.4	—
Oct. 15, 1948	4.2	—
Dec. 21, 1948	4.8	—

S5317. (F-17.) Walter Kobylenski, Middle Rd and Deep Hole Rd., Riverhead.

Aug. 10, 1948	14	—

S5341. (F-17.) Long Island Vegetable Research Farm, Sound Ave., Riverhead.

April 13, 1948	20	—
June 17, 1948	19	—
April 4, 1949	23	—
Dec. 14, 1949	24	—

S5344. (F-17.) J. P. McCabe, Middle Road, Riverhead.

Aug. 13, 1948	30	—

S5362. (E-15.) New York State Game Farm, Route 25, Middle Island.

May 27, 1948	5.1	—
July 29, 1949	6.8	—

S5366. (F-17.) A. F. Nienstadt, Roanoke Ave., Riverhead.

Aug. 9, 1948	28	—

S5475.-S5476. (F-20.) W. Vanston, Nassau Point.

Sept. 13, 1948	37	—
July 11, 1950	103	—

S5503. (F-19.) F. J. Zaweski, Jamesport.

Sept. 8, 1948	34	—

S5518. (E-15.) Brookhaven National Laboratory, Well No. 7, Brookhaven.

May 13, 1948	4.9	—
Oct. 15, 1948	5.0	—
Aug. 3, 1949	4.5	—

S5602. (G-19.) Walter Bialeski, North Rd., Cutchogue.

Sept. 8, 1948	26	—

S5615. (F-22.) A. Tiska, Millstone Road, Bridgehampton.

Date of collection	Chloride (ppm)	Temperature (°F)
July 7, 1949	27	—

S5625. (F-18.) John F. Kruszeski, Main Rd., Aquebogue.

Aug. 13, 1948	28	—

S5665. (F-19.) John F. McNulty, Laurel Lane, Laurel.

July 9, 1948	26	—
Sept. 14, 1949	34	—
July 12, 1950	24	54.2
July 7, 1952	24	—
July 1, 1953	22	—

S5707. (F-17.) John Balnis, Reeves Ave., Riverhead.

Aug. 13, 1948	29	—

S5708. (F-16.) William Tyska, Main Road, Calverton.

Aug. 13, 1948	25	—

S6028. (F-18.) Henry Hallock, Pier Ave., Riverhead.

July 29, 1948	22	—
July 12, 1949	25	—
Aug. 2, 1949	24	—
Aug. 15, 1949	28	—
Aug. 30, 1949	26	—
July 13, 1950	21	—

S6029. (F-17.) John Greseck, Twomey Ave., Calverton.

Aug. 12, 1948	23	—

S6038. (G-20.) Edward Zuhoski, Cox Lane, Cutchogue.

Sept. 9, 1948	20	—

S6059. (G-20.) Anton J. Kull, south of Indian Neck Lane, Peconic.

Sept. 10, 1948	493	—
Sept. 15, 1949	48	—
July 7, 1952	900	—
June 30, 1953	1600	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S6119. (G-19.) William Wickham, Main Rd., Cutchogue.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 16, 1948	26	—
Sept. 13, 1949	28	—
July 11, 1950	24	52.0
July 7, 1952	24	—
July 1, 1953	25	—

S6148. (G-20.) P. Orlowski, Sterlings Lane, Cutchogue.

Sept. 9, 1948	24	—
Aug. 25, 1949	28	—

S6149. (G-20.) J. Pietrewicz, Cox Lane, Cutchogue.

Sept. 8, 1948	33	—
Summer 1949	32	—
July 18, 1949	28	—
Aug. 2, 1949	32	—
Aug. 15, 1949	32	—
Aug. 25, 1949	36	—
Aug. 30, 1949	24	—
Sept. 20, 1949	32	—
July 11, 1950	30	51.5
July 7, 1952	32	—

S6150. (F-19.) S. Slediaski, Breakwater Rd., Mattituck.

Sept. 7, 1948	20	—

S6190. (G-19.) D. Cooper, Bergen Ave., Mattituck.

Sept. 7, 1948	27	—

S6192. (G-19.) T. Bonkoski, Alvah's Lane, Cutchogue.

Sept. 9, 1948	25	—

S6193. (G-20.) S. Doroski, North Road, Southold.

Sept. 13, 1948	25	—
Aug. 2, 1949	30	—
Aug. 24, 1949	30	—
July 12, 1950	30	—

S6405. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Oct. 18, 1948	5.9	—
Feb. 2, 1951	7	—
Mar. 3, 1953	10	—

S6406. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Date of collection	Chloride (ppm)	Temperature (°F)
Oct. 14, 1949	4.1	—
Feb. 2, 1951	8	—
Dec. 10, 1952	5	—

S6407. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Dec. 17, 1948	7	—
Sept. 14, 1951	4	—
Mar. 10, 1953	5	—

S6409. (E-15.) Brookhaven National Laboratory, Deep observation well No. 1, Brookhaven.

Nov. 8, 1948	4.1	—

S6425. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Nov. 15, 1949	4.8	—
Aug. 24, 1951	5	—
Sept. 25, 1952	4	—

S6426. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Nov. 13, 1950	7	—
May 16, 1952	6	—
Nov. 28, 1952	5	—

S6432. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Dec. 17, 1948	4.4	—

S6434. (E-15.) Brookhaven National Laboratory, Deep Well, No. 2, Brookhaven.

June 2, 1949	5.6	—

S6456. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

Sept. 13, 1949	7.1	—

S6471. (E-15.) Brookhaven National Laboratory, Test Well, Brookhaven.

July 29, 1949	3.8	—

S6697. (E-15.) Brookhaven National Laboratory, Well No. 3B, Brookhaven.

Nov. 13, 1950	7	—
Jan. 18, 1952	6	—
Nov. 28, 1952	5	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S6779. (G-19.) Martin Sidor, Middle Road, Mattituck.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 8, 1948	30	—
Sept. 14, 1949	38	—
July 12, 1950	26	—
July 7, 1952	28	—
July 1, 1953	25	—

S6780. (F-19.) John Miosa, north of Cox Neck Lane, Mattituck.

Sept. 7, 1948	24	—
July 18, 1949	24	—
Aug. 2, 1949	25	—
Aug. 30, 1949	22	—
Sept. 6, 1949	25	—
July 12, 1950	20	52.3
July 7, 1952	24	—
June 30, 1953	23	—

S6901. (F-18.) Joseph Gatz, 1 mile south of Sound Ave., Riverhead.

July 29, 1948	12	—

S7117. (E-21.) W. A. Stachecki, north of Route 27, Southampton.

July 6, 1949	22	—

S7123. (G-20.) Gagen Brothers, east side Young's Ave., Southold.

July 7, 1950	65	52.9

S7168. (H-22.) Edward King, Route 25, Orient.

Sept. 14, 1948	37	—
Sept. 23, 1948	41	—
Oct. 12, 1948	42	—
Sept. 18, 1949	36	—
July 6, 1950	36	51.9

S7169. (H-22.) R. W. Gillispie, Route 25, ½ mile east of Platte Lane, Orient.

Sept. 23, 1948	62	—
Sept. 15, 1949	56	—

S7170. (H-22.) Stanley Koroleski, Main Rd., Orient Point.

Sept. 23, 1948	54	—
Sept. 30, 1948	52	—
Oct. 15, 1948	54	—
July 5, 1949	55	—
July 18, 1949	56	—
Aug. 1, 1949	60	—
Aug. 15, 1949	60	—
July 6, 1950	50	51.5
July 7, 1952	78	—

S7171-S7172. (H-22.) E. Kenneth Tabor, Main Rd., east of Platte Lane, Orient.

Sept. 24, 1948	40	—
Sept. 30, 1948	43	—
July 18, 1949	44	—
July 6, 1950	40	—
July 9, 1952	36	—

S7173. (H-22.) George W. Hallock, Platte Lane, Orient.

Sept. 24, 1948	15	—
Sept. 14, 1949	16	—
July 6, 1950	12	—

S7174. (H-22.) G. Hallock, east of Orchard St., south of Route 25, Orient.

Sept. 14, 1949	24	—
July 6, 1950	18	—

S7175. (H-22.) William Haberman, Main Road, Orient.

Sept. 30, 1948	48	—
Sept. 14, 1949	60	—
July 6, 1950	41	51.8

S7176. (H-22.) H. S. Duval, Orient Point.

Sept. 30, 1948	1000	—
July 5, 1949	465	—
July 18, 1949	500	—
Aug. 1, 1949	552	—
Aug. 15, 1949	630	—
Aug. 30, 1949	540	—
Sept. 15, 1949	350	—

S7179. (H-22.) E. Kenneth Tabor, Orchard St., Orient.

Sept. 30, 1948	66	—
July 8, 1949	40	—
Aug. 30, 1949	40	—
Sept. 15, 1949	38	—
July 7, 1952	48	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S7180. (H-22.) D. M. Robertson, Main Rd., Orient.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 30, 1948	48	—
Sept. 14, 1949	48	—
July 6, 1950	46	—
July 7, 1952	48	—

S7267. (G-20.) Southold Township (Town Dump Well), Oregon Rd., Cutchogue.

Sept. 9, 1948	20	—

S7269. (F-18.) J. P. Celic Duck Farm, Peconic Bay Blvd., South Jamesport.

Aug. 21, 1948	29	—
Sept. 16, 1949	30	—
July 12, 1950	29	—

S7293. (E-21.) W. A. Stachecki, Flying Point Rd., south of Route 27, Southampton.

July 6, 1949	28	—

S7334. (G-19.) Deforrest Horton, Alvah's Lane, Cutchogue.

Summer 1949	70	—

S7499. (F-21.) R. Wesnofske, Cook Lane, Bridgehampton.

July 7, 1949	26	—

S7569. (E-19.) Hampton Bays Water Co., Well No. 4, Ponquoque Ave., Hampton Bays.

Aug. 4, 1950	25	—

S7570. (F-23.) Home Water Co., Oak View Highway, East Hampton.

July 7, 1949	9	—

S7665. (F-18.) Felix Zaweski, Jamesport.

Summer 1949	28	—

S7741. (E-21.) Rosko Farms, No. 2, Halsey's Neck Lane, Southampton.

July 6, 1949	28	—

S7870. (H-22.) Latham Brothers, south of Route 25, Orient.

July 6, 1950	48	51.5

S7905. (G-20.) K. Tuthill, between Railroad Ave. and Boiseau Ave., Southold.

Date of collection	Chloride (ppm)	Temperature (°F)
July 7, 1950	35	52.7
July 7, 1952	34	—
June 30, 1953	28	—

S8139. (D-17.) M. Rogers, Remsenberg Rd., Route 27, Speonk.

July 6, 1949	13	—

S8778. (H-22.) Latham Brothers, south of Route 25, Orient.

July 6, 1950	24	—

S9138. (G-20.) E. E. Boisseau, Boisseau Ave., Southold.

Dec. 14, 1949	42	—

S9139. (H-21.) E. Wiggins, North Rd., ½ mile west of East Marion.

Dec. 14, 1949	18	—

S9140. (F-23.) Ferris Talmadge, Long Lane, Easthampton.

Dec. 14, 1949	30	—

S9141. (D-15.) Mastic Acres Realty Co., (Sales Office), Shirley.

Feb. 13, 1950	5.9	—
Mar. 21, 1952	8	—
Jan. 15, 1953	4	—

S9142. (D-15.) Mastic Esso Service Station, (Frank Stiefel), Mastic.

Feb. 13, 1950	6.9	—
Feb. 5, 1951	8	—
April 11, 1952	5	—
Feb. 2, 1953	6	—

S9143. (D-15.) Frank Beeker, Weeks Ave., Center Moriches.

Mar. 3, 1950	5.2	—
Dec. 3, 1951	4	—
Feb. 9, 1953	3	—

S9144. (D-16.) Brookhaven Town Police Substation, Route 27, Center Moriches.

Feb. 13, 1951	50	—
July 27, 1951	32	—
Feb. 16, 1953	18	—

Table 2.—Chloride concentrations and temperatures of water from wells in Suffolk County, N. Y., 1928-53—(Continued).

S14597. (H-22.) Mrs. Alice Burden, Orient.

Date of collection	Chloride (ppm)	Temperature (°F)
Sept. 20, 1949	835	—
July 6, 1950	296	—

D-15. (H-22.) Latham Bros., south of North Road, Orient.

Date of collection	Chloride (ppm)	Temperature (°F)
July 6, 1950	24	—
(E-15.) LeKay, Ridge Rd., Ridge.		
Nov. 21, 1952	4	—

Table 3.—Chloride concentrations of water from irrigation ponds in Suffolk County, N. Y., 1948-53.

P-1. (Fig. 2) Perry Douglas, south of North Road, Orient.

Date of collection	Chloride (ppm)
Sept. 24, 1948	18
July 8, 1949	32
July 18, 1949	28
Aug. 2, 1949	32
Aug. 15, 1949	32
Aug. 30, 1949	30
Sept. 15, 1949	24
July 6, 1950	20
July 7, 1952	24

P-2. (Fig. 2) H. M. Demarest and Sons, north of North Rd., Orient.

Sept. 24, 1948	78
Sept. 30, 1948	68
Oct. 21, 1948	76
Sept. 14, 1949	72
July 6, 1950	91
July 7, 1952	62
June 26, 1953	54

P-3. (Fig. 2) Irving Latham, north of North Road, Orient.

Sept. 24, 1948	14
Sept. 14, 1949	16
July 6, 1950	20
July 7, 1952	12
June 26, 1953	11

P-4. (Fig. 2) Irving Latham, south of North Road, Orient.

Sept. 24, 1948	98
Sept. 30, 1948	96
Oct. 11, 1948	100
July 5, 1949	40
July 18, 1949	28
Aug. 1, 1949	30
July 6, 1950	93
July 7, 1952	48
June 26, 1953	47

P-5. (Fig. 2) H. S. Duval, south of North Road, Orient.

Sept. 30, 1948	56
July 5, 1949	64
July 18, 1949	48
Aug. 1, 1949	124
Aug. 15, 1949	94
Aug. 30, 1949	120
Sept. 15, 1949	65
July 6, 1950	31
July 7, 1952	56
June 26, 1953	32

P-6. (Fig. 2) H. S. Duval, south of North Road, Orient.

Sept. 30, 1948	5810
July 5, 1949	205
July 18, 1949	250
Aug. 1, 1949	317
Aug. 15, 1949	320
Aug. 30, 1949	340
Sept. 15, 1949	268
July 6, 1950	164
July 7, 1952	106
June 26, 1953	60

P-7. (Fig. 2) E. King, south of Main Road, East Marion.

Sept. 24, 1948	40
July 7, 1950	20
July 7, 1952	32

P-9. (Fig. 2) G. Young, south of Main Rd., Orient.

July 6, 1950	61
July 7, 1952	202
June 26, 1953	44

P-10. (Fig. 2) J. Cassidy, south of Main Rd., W. Greenport.

July 11, 1950	37
July 10, 1952	34
June 30, 1953	48

P-11. (Fig. 2) J. Cassidy, south of Main Rd., W. Greenport.

July 11, 1950	112
July 10, 1952	54
June 30, 1953	49

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*GW- 1. Withdrawal of Ground Water on Long Island, N. Y.; D. G. Thompson and R. M. Leggette. 1936.

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GW-38. Chloride Concentration and Temperature of Water from Wells in Suffolk County, Long Island, N. Y., 1928-53; J. F. Hoffman and S. J. Spiegel. 1958.

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